On approval of the Unified Rating and Skills Guide for Jobs and Occupations of Manual Workers (Issue 6)

Unofficial translation

Order of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated September 21, 2018 № 401. It was registered with the Ministry of Justice of the Republic of Kazakhstan on October 15, 2018 № 17548.

Unofficial translation

In accordance with sub-paragraph 16-1) of Article 16 of the Labour Code of the Republic of Kazakhstan dated November 23, 2015 **I hereby ORDER:**

1. To approve the enclosed Uniform Rating and Skills Guide for Jobs and Occupations of Manual Workers (issue 6).

2. The Department of Labor and Social Partnership of the Ministry of Labour and Social Protection of the Population of the Republic of Kazakhstan, in accordance with the procedure established by legislation, shall ensure:

1) the state registration of this order with the Ministry of Justice of the Republic of Kazakhstan;

2) within ten calendar days from the date of state registration of this order, the direction hereof in both Kazakh and Russian languages to the Republican State Enterprise on the Right of Economic Management "Republican Center of Legal Information" for official publication and inclusion in the Reference Control Bank of Regulatory Legal Acts of the Republic of Kazakhstan;

3) within ten calendar days after the state registration of this order, sending a copy of it for official publication in periodicals;

4) the placement of this order on the Internet resource of the Ministry of Labour and Social Protection of the Population of the Republic of Kazakhstan after its official publication

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3. The following orders shall be declared to be no longer in force:

1) Order № 318-ө-m of the Minister of Labour and Social Protection of the Republic of Kazakhstan dated August 14, 2012 “On Approval of the Unified Rating and Skills Guide for Jobs and Occupations of Manual Workers (Issue 6)” (registered in the Register of State Registration of Regulatory Legal Acts under № 7877, published in the newspaper " Yuridicheskaya Gazeta (Legal Newspaper)" on October 30, 2012, October 31, 2012, November 1, 2012, № 163, 164, 165, (2345, 2346, 2347);

2) Order № 339 of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated May 12, 2015 “On Amendments and Additions to Certain

Orders of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan" (registered in the Register of State Registration of Regulatory Legal Acts under № 11336, published in the Information Legal System "Adlet" on July 10, 2015).

4. The control over the execution of this order shall be entrusted to Altayeva N.B.

5. This order shall become effective upon expiry of ten calendar days after the day of its first official publication.

Minister of Labour and Social Protection of the Population of the Republic of Kazakhstan — *M. Abylkassymova*

Approved by Order № 401
of the Minister of Labour and Social Protection of the Population
of the Republic of Kazakhstan
of September 21, 2018

Unified Rating and Skills Guide for Jobs and Occupations of Manual Workers (Issue 6)

Chapter 1. Introduction

1. The Unified Rating and Skills Guide for Jobs and Occupations of Manual Workers (Issue 6) (hereinafter referred to as URSG) contains the works on drilling wells and oil and gas production, corresponding in complexity to their implementation to those contained in the occupational characteristics of the corresponding categories.

2. The URSG is developed by the Ministry of Labour and Social Protection of the Population of the Republic of Kazakhstan.

3. The Occupational characteristics are used when charging work and assigning qualifying grades to workers in organizations, regardless of the form of their ownership and organizational-legal forms, where there are production and types of work specified in this URSG.

Chapter 2. Occupational Characteristics of Well Drilling Workers by Categories

Section 1. Drilling Fluid Preparatory Operator, 2 Category

4. Characteristics of the work:

preparation, weighting and chemical treatment of drilling fluids under the guidance of a higher qualification drilling preparatory operator;

loading clay mixers or hydromixers with clay, water, weighting agents and chemicals;

starting and stopping a clay mixer or a hydraulic mixer, opening valves and pumping ready mud into spare barns;

filling up of liquid chillers with drilling mud to be sent to drilling rigs;

supervising the work of a clay mixer or a hydraulic mixer;

cleaning of drain boles and clay mixers from sediment;
unloading and transportation of chemicals and weighting agents.
5. Is obliged to know:
physical and chemical properties of clay;
weighting agents and chemicals;
purpose of drilling mud, weighting agents and chemical reagents;
purpose and rules of use of instrumentation to determine the parameters of drilling fluids;
rules for the treatment of chemical reagents, the purpose and structure of equipment and devices for loading, preparation and processing of drilling mud.

Section 2. Drilling Fluid Operator, 3 Category

6. Characteristics of work:
preparation, weighting and chemical treatment of drilling fluids;
pumping drilling fluids into storage barns and mortar carriers;
selection of the mode of operation of the pumps during the preparation and injection of drilling mud;
participation in pressure testing of pumps and high-pressure lines, in preventive and maintenance repairs of pumps and other equipment installed at the alumina refinery or at the drilling site.
7. Is obliged to know:
physical and chemical properties of clay;
weighting agents and chemicals;
technical characteristics and principle of operation;
rules of operation of mechanical and hydraulic clay mixers, drive mechanisms and other equipment of the clay plant, plumbing in the volume of work performed.

Section 3. Drill Pipe Joint Installer, 4 Category

8. Characteristics of the work:
installation of parts on the drill pipe in the hot state and on the light-alloy drill pipe in the cold state;
checking elements of threads of pipes, locks, couplings and rejecting them during the calibration process;
selective selection of locking parts for tightness to the pipe;
measuring thread by gauges of all systems;
monitoring the state of gauges, instrumentation and tools;
heating locking parts in various heating furnaces;
control over the temperature of the lock parts and the quality of their mounting.
9. Is obliged to know:

purpose, types and sizes of pipes, locks, couplings, used calibers, measuring tools;
types of threads and tolerances installed on them, the value of the stamps on the pipes;
rules and values of fastening moments of locking parts in a hot condition;
heating furnace designs;
the device of instrumentation for determining the heating temperature of locking parts, the composition and purpose of the paste for lubricating the threads of all types of pipes;
device mechanical key and rules of management.

Section 4. Drilling Technician, 4 Category

10. Characteristics of the work:
disassembling, repairing, assembling, testing and maintaining individual competitors, systems and installations under the guidance of a higher qualification drilling technician;
replacement of worn parts of drilling pumps;
check of a condition of a tower, talevy system, marching ladders;
participation in the assembly work of wellhead and X-mas tree fittings, dismantling of drilling equipment.
11. Is obliged to know:
device and rules of operation of the serviced equipment;
rules of use of the used instrumentation, methods of equipment of the pulley system;
rules and lubrication map of drilling equipment;
installation schemes for the blowout preventer equipment, the purpose of the used devices of small-scale mechanization and instrumentation.

Section 5. Drilling Technician, 5 Category

12. Characteristics of the work:
disassembling, repairing, assembling, testing and servicing various units and drilling rigs, as well as a pneumatic control system and its locking devices, a set of mechanisms for automatic lowering and lifting of tools, blowout equipment and equipment for its control, automatic drilling keys, instrumentation, blocks of preparation of drilling mud, winch and cranes;
Participation in the work on the casing and wellhead equipment, on the assembly and installation of wellhead and gushing valves, in the installation, dismantling and commissioning of drilling rigs equipment.
13. Is obliged to know:
design features of the equipment of the drilling rig and devices used;
technological sequence and organization of labor in the repair, assembly, installation of the drilling rig and its equipment;
rules of operation of equipment of drilling rigs, all types of materials used in their repair;

methods for determining premature wear of parts, static and dynamic balancing of machines and units;

ways to restore worn parts, basic information about the technological process of drilling wells for oil, gas, thermal, iodine-bromine waters and other minerals, lubrication system of components and mechanisms.

When servicing drilling rigs operational and deep exploratory drilling for oil and gas - 6 category.

14. Technical and vocational (secondary special, secondary vocational) education is required.

Section 6. Drilling Electrician

15. Characteristics of the work:

maintenance of electrical equipment of drilling rigs, switchgears for electric motors with voltage up to 6 kilovolts, voltage control stations, pump drives, winches and other equipment, control stations of the bit feed regulator, electric-drag brake for tripping operations;

maintenance of secondary switching and relay protection circuits:

current, differential and other;

maintenance of electrical equipment and drives with voltage up to 6 kilowatts with automatic regulation;

acceptance of all electrical equipment and grounding devices of drilling rigs after installation, trial start of electric motors under the supervision of engineering and technical personnel;

verification and troubleshooting in complex circuits and devices of electrical equipment;

verification and elimination of malfunctions in complex motor control circuits made on contactless elements (with thyristor circuits);

adjustment and adjustment of cells of thyristor converters of electric drives;

maintenance of electrical equipment units with electric machine control systems with current and voltage feedback;

maintenance and repair of electric boilers;

repair of switchgear electrical equipment while drilling wells and ensuring its uninterrupted operation.

16. Is obliged toknow:

the technological process of drilling wells for oil, gas, for the detection of thermal, iodine-bromine waters and other minerals;

fundamentals of electrical engineering, telemechanics and electronics;

device and electrical diagrams of electrical machines, apparatus, measuring devices, automatic control and remote control;

methods of testing electrical equipment, cable and air networks, the complete electrical circuit of the object being serviced and of each section of the drilling rig;

rules for setting up and repairing complex electrical devices, measuring, welding and power transformers, rectifiers, automatic control devices, including thyristor motor control circuits for pumps, winches, rotors and chisel feeders;

the principle of operation of converters and various types of generators, methods of replacing individual parts of electrical machines and apparatus in drilling conditions, the calculation of the need for static capacitors to increase the power factor, the rules for setting and regulating the used instrumentation.

17. Technical and vocational (secondary special, secondary vocational) education is required.

When drilling wells, on which asynchronous electric motors with a power of up to 320 kW (inclusive) are used as a drive for the main units - 4 bits;

when drilling wells, on which DC motors, synchronous high-voltage motors or synchronous and asynchronous motors with a power of more than 320 kilowatts up to 500 kilowatts - 5 category are used as the drive of the main units;

when drilling wells, on which as a drive of the main units are used electric motors of direct and alternating current with power over 500 kW - 6 category.

Section 7. Vacuum Distillation Unit Operator

18. Characteristics of the work:

preparation of the vacuum unit for operation at the facility;

technological process of mechanized collection of gas condensate, spilled (waste) oil products and their delivery to the place of disposal;

monitoring the operation parameters of the vacuum pump, the technical condition of the oil tank, instrumentation and all auxiliary mechanisms of the installation and the vehicle being serviced;

the implementation of preventive and maintenance of the equipment installation and the car;

keeping a log of installation work;

driving, refueling fuel and lubricant and coolant.

19. Is obliged to know:

basic information about the process of oil and gas production;

physical and chemical properties of oil, gas condensate, spilled oil products;

oil well operation methods;

wellhead piping;

device and operating rules of the vacuum unit, used instrumentation;

plumbing in the amount of work performed, traffic rules and technical operation of vehicles;

causes, methods of detection and elimination of malfunctions arising during the operation of the vehicle;

the order of maintenance and rules for storing cars in garages and parking lots;

rules for the use of batteries and car tires;

ways to increase the overhaul of the car;

rules for running new cars and after major repairs;

rules for the transport of dangerous goods, the influence of weather conditions on driving safety;

ways to prevent accidents;

rules for filling primary documents on accounting for the work of the installation being serviced;

features of the organization of maintenance and repair of vehicles in the field.

When servicing under the guidance of a higher-qualification vacuum distillation unit operator, 3 categories (assistant to the vacuum system operator).

When servicing vacuum installations mounted on the vehicle chassis, with an oil tank capacity of up to 10 meters inclusive - 4 category.

When servicing vacuum installations mounted on the vehicle chassis, with a capacity of oil tankers from 10 cubic meters to 12 cubic meters, inclusive - 5 category.

When servicing vacuum units mounted on the vehicle chassis, with an oil tank capacity over 12 cubic meters - 6 category.

20. Note:

The vacuum distillation unit operators shall be rated one rank higher in the cases when the whole complex of repairs and maintenance of the driven vehicle is performed in the absence of a specialized vehicle maintenance service in the organization.

21. Technical and vocational (secondary special, secondary vocational) education is required.

Section 8. Laboratory Assistant-Collector, 2 Category

22. Characteristics of the work:

chemical treatment and measurement of the parameters of drilling and cement mortars at the drilling site and their registration in the shift log;

supervise the preparation of chemicals;

sampling of cement mortar in the process of cementing;

observation of core sampling, sampling of rocks, their packing and shipping;

maintenance of primary geological documentation.

23. Is obliged to know:

basic information on the geology of deposits, on the technological process of drilling wells for oil, gas and other minerals;

the main physico-chemical properties of drilling fluids, grouting cements, weighting agents and chemical reagents;

methods of preparation of drilling fluids, chemical reagents, purpose and rules for the use of instrumentation to determine the parameters of drilling and cement mortars.

Section 9. Laboratory Assistant Collector, 3 Category

24. Characteristics of the work:

drawing up a recipe for the treatment of drilling and cement mortars;

control over the preparation of fast-setting mixtures on the rig when combating takeovers, laying the core and checking the correctness of its description;

determination of the quality of reagents used in the treatment of drilling solutions, research related to quality improvement solutions;

control checks of instrument readings;

preventive inspection and repair of equipment to measure the parameters of solutions.

25. Is obliged to know:

basic information on the geology of deposits, on the technological process of drilling wells for oil, gas and other minerals;

physical and chemical properties of solutions, grouting cements, weighting agents and chemical reagents;

device instrumentation to determine the parameters of drilling and cement mortars;

methods of eliminating complications in the drilling process;

methods for the selection and description of the core, the device and purpose of equipment and devices for the preparation and processing of drilling mud.

Section 10. Coiled Tubing Operator

26. Characteristics of the work:

unit maintenance in the process of capital and current repairs and during technological operations in wells;

installation preparation for operation;

control and management of the modes of operation of the vehicle, the energy unit and other systems of operation of the installation;

monitoring the operation of the recorder and installation mechanisms;

maintenance of electrical installation;

keeping a log of installation work;

driving a car or a tractor, filling them with fuel, lubricants and coolant;

check of the technical condition and reception of the installation at the beginning of the work shift;

control of the hydraulic manipulator of the installation for auxiliary, installation and dismantling works;

participation in the preparatory and final works, in the installation, dismantling and maintenance of auxiliary installation mechanisms;

production of the current repair of installation mechanisms, automobile, tractor;

elimination of minor operational malfunctions arising during the operation of the installation that do not require disassembly of mechanisms.

27. Is obliged to know:

the purpose, device, principle of operation and operation of the units, mechanisms and instruments of the installation being serviced;

Traffic Laws;

technical characteristics and operating rules of the coiled tubing unit, used mechanisms, devices;

features of the organization of maintenance and repair of the car in the field;

industrial safety requirements for the device and safe operation of lifting mechanisms;

technological process of extraction of oil, gas and other minerals;

well construction;

technological process and types of capital, current repairs;

brands and grades of fuels and lubricants;

fundamentals of electrical engineering and plumbing in the volume of work performed;

methods of repair of the engine, transmission and chassis of lifting mechanisms.

Underground and capital repairs on wells of the 1st category of wells complexity up to 1,500 meters deep inclusive - 5 category.

Underground and capital repairs on wells of the II category of complexity and depth over 1500 meters, directional wells, regardless of their depth, and wells with complicated geological conditions – 6 categories.

Underground and capital repairs, at wells of the II category of complexity and with a depth of more than 3000 meters and higher – 7 categories.

28. Technical and vocational (secondary special, secondary vocational) education is required.

Section 11. Pipe Pressure Testing Operator, 3 Category

29. Characteristics of the work:

pressure testing of all types and sizes of pipes with the pressure of up to 10 megapascals inclusive (up to 100 kilograms-force per centimeter square), used in drilling wells;

feeding pipes for pressure testing with the help of lifting mechanisms;

pipe rolling to the place of crimping, unscrewing the safety rings and nipples before crimping, lubricating the threads, tightening the rings after crimping, patterning and laying the pipes after crimping;

participation in the assembly, disassembly of the pressing equipment, preparation of equipment for carrying out pressure testing, participation in preventive and maintenance repairs of equipment and accessories;

maintenance of primary documentation.

30. Is obliged to know:

pipe crimping technology and rules;

purpose, device and technical characteristics of the pressing equipment;

lifting mechanisms and elements of small-scale mechanization;

purpose, types and sizes of pipes, pressure fittings, gauges, templates, probes;

the purpose and principle of operation of the used instrumentation;

fundamentals of electrical engineering and plumbing in the amount of work performed.

When crimping pipes with pressures above 10 megapascals (over 100 kilograms-force per square centimeter) to 15 megapascals (up to 150 kilograms-force per square centimeter) inclusive - 4 category;

at pressure testing of pipes with pressure over 15 megapascals (over 150 kilogram-force per square centimeter) - 5 category.

Section 12. Oil and Gas Drilling Unit Operator, 3 categories

31. Characteristics of the work:

maintenance and repair of engines with a total capacity of up to 1000 kilowatts, power and diesel electric units, fuel-oil installation, compressors, pneumatic system, transmissions and electrical equipment of a drilling rig under the guidance of a higher-skilled oil and gas drilling unit operator;

lubrication and refueling of engines with fuel, oil and coolant;

participation in the installation, dismantling and transportation of drilling equipment and engines.

32. Is obliged to know:

the principle of operation of drilling equipment, engines, power units and transmission devices;

purpose of drilling equipment, auxiliary systems and applied instrumentation and automation, brand and grade of fuel and lubricants, basic information on electrical engineering.

Section 13. Oil and Gas Drilling Unit Operator, 4 Category

33. Characteristics of the work:

maintenance and repair of engines with a total capacity of up to 1000 kilowatts inclusive, power and diesel electric units, fuel and oil installation, compressors, transmission and pneumatic system of drilling rigs, electrical equipment of the drilling rig, as well as

maintenance and repair of engines with a capacity of over 1000 kilowatts and gas turbine engines under the guidance of the oil and gas drilling unit operator of higher qualification;

disassembly, assembly, centering, troubleshooting and adjustment of power equipment and machines;

carrying out current and complex repairs of engines and power units, adjustment of diesel engines;

taking measures to prevent malfunctions in the operation of power and drilling equipment, engines, power units, diesel generators and other stations;

regulation and overlay of cooling systems, lubrication, fuel supply and gas distribution of power units, remote control systems of power units and automatic protection systems of power units;

maintenance, disassembly, repair and assembly, adjustment and adjustment of turbotransformers and turbo-coupling;

providing the required set operating modes of the engines and power units, depending on the drilling conditions and the time of year, when new ones are being run in and put into operation, and those that have been removed from the overhaul;

keeping a shift log, accounting for the operation of engines and power units, accounting for the consumption of fuel and lubricants;

guidance of workers in the maintenance and repair of drilling and power equipment.

34. Is obliged to know:

technological process of drilling, technical characteristics, device drilling equipment, engines, power units and transmission devices;

the appointment of aerial structures and communications, the causes;

ways to prevent and troubleshoot the operation of engines of power, drilling equipment and machines, methods of adjustment;

rules of lubrication of drilling and power equipment, the temperature of the engine, the design of machines;

operation schemes of remote-control systems, accounting and reporting system in the operation of power equipment;

consumption rates of fuels and lubricants, electrical engineering fundamentals.

Footnote. Paragraph 34 as amended by Order № 328 of the Acting Minister of Labor and Social Protection of Population of the Republic of Kazakhstan dated August 26, 2024.

35. Technical and vocational (secondary special, secondary vocational) education is required.

Paragraph 13-1. Oil and gas drilling rig operator, grade 5

Footnote. Chapter 2 has been supplemented with paragraph 13-1 in accordance with Order № 328 of the Acting Minister of Labor and Social Protection of Population of the Republic of Kazakhstan dated August 26, 2024.

35-1. Characteristics of the work:

Operation and transportation of a mobile drilling rig and individual functions of installation and dismantling work at a stationary drilling site;

Maintenance and repair of engines with a total capacity of over 1,000 kilowatts and above , as well as gas turbine engines;

Installation, dismantling, and transportation of drilling rigs, including mobile, derrick-mounted structures, derrick raising and lowering mechanisms, drilling mud circulation system equipment, and spare tank units;

Alignment of the drilling rig, drilling and power equipment, and individual drilling rig units;

Participation in the assembly, movement, and dismantling of drilling rigs with derricks of all types and designs and equipment used in drilling;

Maintenance, dismantling, repair, and assembly, adjustment, and setup of engines, turbotransformers, and turbo couplings;

Supervision of workers in the maintenance and repair of engines with a total capacity of up to 1000 kilowatts.

35-2. Must know of:

methods and rules for the installation, dismantling, and transportation of drilling rigs, and the design of a mechanization and automation system;

The purpose and technical characteristics of the complex of mechanisms for lifting and lowering operations, circulation system mechanisms, steam and water supply systems, power supply systems, pneumatic systems, and heating systems for workstations and mechanisms;

when supervising workers servicing and repairing engines with a total capacity exceeding 1000 kilowatts – category 6.

35-3. Technical and vocational (secondary specialized, secondary vocational), or post-secondary education shall be required.

Section 14. Driller of Production and Exploratory Drilling of Oil and Gas Wells

36. Characteristics of the work:

management of the watch;

execution of preparatory work prior to drilling;

conducting the technological process of drilling wells for oil, gas, thermal, iodine-bromine waters and other minerals by deep drilling installations and all related work in accordance with the geological and technical procedure, the regime-technical map and technological regulations;

laying and assembly of the boring tool;

performance of tripping with the use of automatic mechanisms;

performance of work on oriented drilling;

management of the preparation, weighting and chemical treatment of drilling fluids;

control over compliance with the parameters of the drilling fluid and the operation of the mud cleaning system during the drilling process;

equipment wellhead blowout equipment, the use of blowout equipment in case of an emergency;

performance of plugging of gas and water oil showings, sealing the wellhead;

well control in gas and oil showings;

operational control over the technical condition of surface and underground drilling equipment;

checking the operation of instrumentation, automation and safety devices;

the state of the blowout equipment;

preparation of wells for geophysical surveys and participation in their implementation;

the elimination of complications and accidents during drilling;

preparation of the well for the launch of the formation testers and participation in the formation testing operations;

Coring in a given mode with all types of coring shells;

preparation of wells and equipment for casing;

management of work on the laying and patterning of casing, running casing into the well;

participation in casing cementing works, installation of cement bridges, testing of columns for tightness;

development of production wells, testing exploratory wells;

completion of well work;

preparation of drilling equipment for transportation;

participation in the preventive maintenance of drilling equipment, installation, dismantling , transportation of the drilling rig when the crew moves with its machine tool;

maintaining primary documentation on the drilling regime and drilling mud parameters;

when posting offshore wells from floating drilling rigs, participate in the installation and operation of a complex of underwater blowout equipment:

preparation before launching the underwater blowout equipment complex or before launching the underwater blowout equipment at the wellhead of the hydraulic power unit with the main control panel, driller's control panel, remote control, multi-channel hose control panels, auxiliary hose control panel, remote manifold control panel, remote control remote control throttle, ship block emergency speaker control system preventer E, wellhead connector block, BOP "OP540h210", "OP350x700" marine riser tensioning system, the control system guides the ropes divertor;

participate in the leaktightness test of the components of the underwater blowout equipment while it is on the test bollards, when it passes through the sash of the mine aperture , in pressure testing of the underwater blowout equipment on the stand at the working pressure, functionally check the underwater blowout equipment on the stand: I stage - testing of all functions on both control systems from the driller's console, stage II - from the auxiliary

panel in the drilling master's room, stage III - from the shield control of drums of a multichannel hose with the control of compliance of functions triggered on the block of preventers; Stage IV - testing all functions of the emergency acoustic control system of the preventer from the ship’s control unit of the speaker system and the portable sensor;

launching of underwater blowout equipment at the wellhead;

participation in the hydraulic testing of underwater blowout equipment after docking the preventer with the column head, after cementing the casing;

monthly check of the position of choke manifold valves and adjustable fittings, throttle remote control, as well as a check on the control panel of the underwater blowout equipment of the driller’s position of the damping and throttling lines, preventers, control of battery charging pressure, air pressure, pilot pressure and pressure control of plate and universal preventers, pressure control seals telescopic compensator, light and sound alarm;

disconnection from the wellhead in extreme situations (hydrometeorological, technical);

preparation of the open part of the trunk for long-term idle time (conservation), release of the wellhead from the drill pipe, preparation of the tension systems of the marine riser for disconnection from the wellhead, dismantling of the deviant, telescopic compensator of the marine riser;

disconnecting from the wellhead on alarm "Emergency Undocking";

preparation of wells for geophysical surveys and participation in their implementation;

monitoring the position of floating drilling rigs over the wellhead and communication with the dynamic positioning service;

control over the wiring technology with respect to project documentation, actions of watchdog members on the “Emission” alarm, members of the watchman follow the instructions for the immediate elimination of gas-oil and water shows, and maintain underwater blow-out equipment and related devices in constant readiness;

fulfillment of the requirements of the geological and technical control service to remove the technological parameters necessary for calculating well killing, and taking measures to seal the wellhead when detecting gas-oil and water shows and when alerting the geological technical service after each storm sludge of the drilling ship to participate in the preventive inspection of the drilling tower;

control over the working of the rope rope.

37. Is obliged to know:

current rules and instructions for technology, technology and organization of production;

basic information on the geology of deposits and technology for the extraction of oil, gas, thermal, iodine-bromine waters and other minerals;

geological and technical outfit and mode-technological map, geological section of drilled area, information on well construction;

modes of drilling operations in offshore conditions, the purpose, design and technical characteristics of drilling and power equipment, underwater blowout preventive equipment, automatic mechanisms, safety devices, device of electric drills and turbo drills;

ways to eliminate possible malfunctions of the turbodrill, electric drill and current lead, device and purpose of the tools and devices used;

methods of lowering and orienting pipes, electric drills and turbo-drills with diverters during directional and horizontal drilling of wells;

device of used devices of small-scale mechanization, instrumentation, drilling mud cleaning systems, physical and chemical properties of drilling fluids and chemical reagents for preparation and processing of drilling mud, methods of its preparation, restoration and reuse, methods of controlling parameters and ways to reduce the consumption of weighting agents and chemical reagents, standard sizes and principles of rational use of bits used, causes of accidents and complications during drilling, measures for their prevention and elimination, allowable load on the equipment used, design;

purpose and use of fishing tools, type, size, thread marking, strength characteristics of casing, drill and tubing, requirements for preparation of wells for casing running and cementing;

methods and means of protecting the productive horizon from contamination during the drilling process and during the cementing of columns, the technology of well cementing and the conditions that ensure the quality of cementing and the tightness of casing strings;

the consumption rates of the materials used, the purpose, the device of reservoir testers, packers of various designs, technical requirements for the preparation of wells for the launch of reservoir testers and geophysical surveys, piping schemes and design of sealing devices;

technology and methods for the development of production and testing of exploratory wells, the construction and use of ground equipment of fountain and pump wells, surface and subsea equipment, measures taken in the event of storms in the working conditions in the waters

rules for rejecting the working tool, used measuring instruments and safety devices, special safety rules when working in fields containing hydrogen sulfide, orders, instructions and other guidance documents ensuring safety of work during drilling;

charter service on ships.

38. Technical and vocational (secondary special, secondary vocational) education is required:

when drilling wells up to 1500 meters deep inclusive - 5 category;

when drilling wells with a depth of more than 1500 meters and up to 4000 meters inclusive, as well as when drilling directional wells with a depth of up to 1500 meters inclusive - 6 category;

when drilling wells with a depth of more than 4,000 meters and up to 5,000 meters inclusive, horizontal wells with a depth of up to 2,000 meters inclusive, directional wells with

a depth of more than 1,500 meters with complicated geological conditions, during the drilling of which technical measures are taken to prevent the absorption of drilling fluid, rock falls, narrowing of the borehole, gas and oil manifestations, subject to the use of weighted drilling mud with a density of 1.6 grams centimeters of cubic and higher – 7 category;

when drilling wells with a depth of more than 5,000 meters, horizontal wells with a depth of over 2,000 meters, or when drilling wells with floating drilling rigs – 8 categories.

Section 15. Assistant to Driller of Production and Exploratory Drilling of Oil and Gas Wells (First)

39. Characteristics of the work:

maintenance of certain types of work on the process of drilling wells for oil, gas, thermal, iodine-bromine waters and other mineral resources by deep-drilling installations under the guidance of the driller of production and exploratory drilling of wells for oil and gas;

preparation for the start-up of the drilling rig and work during tripping;

participation in the installation of drilling and casing pipes, the layout of drill pipes, and the testing of drill pipes;

control of the operation of automatic and machine keys for fastening columns and tripping ;

preparation and processing of drilling mud;

filling the reserve tanks with drilling mud, monitoring the change in the level of the mud in the receptions;

control of topping up wells;

start-up, shutdown of drilling pumps and control over their work;

identification and elimination of malfunctions in the operation of drilling pumps;

replacement of worn parts of drilling pumps;

participation in the work on the elimination of complications and accidents, work on cementing casing in the well, drilling rig and drilling cement bridges, equipping the wellhead, developing operational and testing exploratory wells;

work, in exceptional cases, on a winch instead of a driller;

carrying out final work on the well, preventive maintenance of drilling equipment, participation in the installation, dismantling and transportation of drilling equipment during the movement of the brigade with its unit;

during the drilling of offshore wells with floating drilling rigs, monitoring the safe operation of subsea blowout equipment, participation in the installation, dismantling and operation of the complex of underwater blowout equipment;

disconnecting from the wellhead in extreme situations (hydrometeorological, technical), releasing the wellhead from the drill pipe, preparing the tension system of the sea riser for disconnecting from the wellhead;

disconnecting from the wellhead on alarm "Emergency Undocking";

monitoring the condition of the pulley block, crown block, pulley rope, elevators, retractor , machine key rollers and auxiliary winches ropes.

40. Is obliged to know:

geology of deposits and technological process of oil, gas, thermal, iodine and other minerals production;

technological process and types of work on the development of production and testing of exploratory wells;

purpose, device and technical characteristics of the equipment used, mechanisms, tools, rules of their operation;

methods of equipment for the pulley system, the device of marching ladders, beds, devices for installing candles under the subbronblock platform, the rules and time schedule of lubrication of drilling equipment;

the purpose and design of the tools and devices used for wiring directional and horizontal wells, the type and dimensions of drilling and casing pipes, the rules for preparing casing pipes for descent;

the purpose and device for determining the parameters of drilling fluids, the construction of the drilling fluid preparation unit;

piping schemes of circulation systems and high-pressure lines, methods of preparation, cleaning and regeneration of drilling fluids, basic physicochemical properties of drilling fluids and chemicals;

installation schemes for blowout equipment, purpose of used devices of small-scale mechanization and instrumentation.

When drilling from floating drilling rigs - the technology of testing and development of offshore wells, the prevention and repair of drilling rig equipment of floating drilling rigs, the purpose and technical characteristics of drilling and casing pipes, tools, tools and equipment used in the construction of offshore wells, the rules for their operation, technology launching and lifting of underwater blowout equipment, riser and other systems, orders, orders and other guidance documents ensuring safety ore during drilling from floating drilling rigs; charter service on ships.

When drilling wells up to 1500 meters in depth inclusive - 4 category;

when drilling wells with a depth of more than 1,500 meters and up to 4,000 meters, inclusively, as well as directional and horizontal wells, regardless of depth – 5 categories;

when drilling wells with a depth of more than 4,000 meters and up to 5,000 meters inclusive - 6 category;

when drilling wells with a depth of more than 5000 meters or from floating drilling rigs - the 7 category;

41. For an assistant to driller of production and exploration drilling for oil and gas (first) 5 , 6 and 7 categories, technical and vocational (secondary specialized, secondary professional) education is required.

Section 16. Assistant Driller of Production and Exploratory Drilling of Oil and Gas Wells (second)

42. Characteristics of the work:

the launch of the drilling rig under the direction of the driller of the production and exploration drilling of oil and gas wells (the second);

performance of horse works at launching operations;

preparation and processing of drilling mud;

starting and stopping the drilling pumps and monitoring their operation and changing the level of flushing fluid in the receiving tanks of the drilling pumps;

determination and elimination of malfunctions in the operation of drilling pumps, replacement of worn-out parts of drilling pumps;

participation in the elimination of complications and accidents, cementing casing in the well, installing and drilling cement bridges, wellhead equipment, development of production and testing exploration wells;

carrying out preventive maintenance of drilling equipment, final work on the well;

during the drilling of offshore wells from floating drilling rigs - participation in work to disconnect from the wellhead in extreme situations (hydrometeorological, technical).

43. Is obliged to know:

technological regulations for well drilling technology, production organization;

Basic information on the geology of deposits, the technological process of oil, gas, thermal, iodine and other minerals production;

technological process and types of work on the development of production and testing of exploratory wells;

the purpose, design and technical characteristics of the equipment used, the mechanisms, the instrument, the rules for their operation.

When drilling from floating drilling rigs - device and purpose of surface and subsea equipment used in the drilling of offshore wells, technology for the development and testing of offshore wells, device and technical characteristics of the equipment of the drilling complex of floating drilling rigs, methods of rigging the rigging system, rules and map of drilling lubrication equipment, tools and devices for wiring directional wells, sizes of bits, drill, casing and tubing, the rules for preparation of casing pipes for descending into the well, device instrumentation and methods for determining the parameters of drilling fluids, methods of preparing, processing and cleaning drilling fluids, basic physicochemical properties of drilling fluids and chemicals,drilling rig schemes and operation rules for blowout equipment, purpose of used small-scale mechanization devices and instrumentation, ground equipment of gushing and pumping wells, orders, orders and other governing documents ensuring safety of work in drilling wells;

charter service on ships.

When drilling wells up to 1500 meters in depth inclusive - 4 category;

when drilling wells with a depth of more than 1500 meters and up to 4000 meters, inclusive - 5 category;

when drilling over 4000 meters or from floating drilling rigs - 6 category.

For an assistant driller of operational and exploratory drilling of wells for oil and gas (second) 5 and 6 bits, technical and vocational (secondary specialized, secondary professional) education is required.

Section 17. Assistant Driller of Production and Exploratory Drilling of Oil and Gas Wells (third), 3 Category

44. Characteristics of the work:

participation in the process of drilling wells for oil, gas, thermal, iodine-bromine waters and other minerals by deep drilling installations;

preparation of the drilling rig for dismantling and installation under the guidance of the driller of operational and exploratory drilling of wells for oil and gas;

participation in unloading, laying of drill and casing pipes on gangways, layout of the bottom of the drill string, crimping of drill pipes;

Everyday health check of elevators, wedges, keys, hydraulic keys, small-scale mechanization tools;

participation in the preparation and processing of drilling mud, monitoring the circulation of the solution and the level of the solution in the measuring tanks;

cleaning the gutter system, vibrating screens from cuttings and clogging;

cleaning of measuring tanks, process tanks and sumps from sludge and clogging;

under the leadership of the production and exploration well driller, oil and gas wells are involved in the installation, dismantling and maintenance of the blowout protection equipment, in the “piping” of the wellhead process equipment, in the wellhead equipment with sealing devices;

casing gauging and gauging, cleaning of pipe threads from clogging;

participation in the development of production and testing of exploration wells, in the preparation of various pastes and liquids, in the elimination of complications, accidents, in casing cementing, installation and drilling of cement bridges under the guidance of the drilling and exploratory drilling of oil and gas wells;

participation in the buildup of the tool, during the descent of the casing string, the supply of the column to the rotary site under the direction of the driller of operational and exploratory drilling of wells for oil and gas;

participation in the installation, dismantling and transportation of drilling equipment during the movement of the brigade with its unit under the direction of the driller of operational and exploratory drilling of wells for oil and gas;

maintaining cleanliness on the "floor" of the drilling rig, bit platform, and technological equipment of the drilling rig;

minor repairs to shelters, flooring and fences of the receiving bridge, the floor of the drilling, circulation system, sheds and outbuildings of the drilling rig;

participation in the final work on the completion of the well construction, and in the preventive maintenance of drilling equipment under the guidance of the driller of operational and exploratory drilling of oil and gas wells;

performs ancillary work (cleaning and cleaning equipment, lubrication mechanisms and other work).

45. Is obliged to know:

basic information about the technological process of oil production, gas, thermal, iodine-bromine waters and other minerals, the technological process and the types of work on the development of production and testing exploratory wells;

the purpose, design and technical characteristics of the equipment used, the mechanisms, the instrument, the rules for their operation;

tackle tooling techniques;

rules and lubrication map of drilling equipment;

rules of casing preparation for launching into the well;

common technical rules for drilling operations;

rules of operation of mobile lighting generators;

purpose of the used devices of small-scale mechanization and instrumentation, ground equipment of the gushing and pumping wells;

basic physical and chemical properties of drilling fluids and chemicals;

methods of preparation, processing and cleaning of drilling fluids;

basic physical and chemical properties of drilling fluids and chemicals;

device instrumentation and methods for determining drilling fluid parameters;

drilling rig designs and operating procedures for blowout equipment;

orders, directives and other governing documents to ensure occupational safety during the drilling of wells.

Section 18. Drilling Rig Installer, 3 Category

46. Characteristics of the work:

installation, dismantling and transportation of drilling rig units, boiler plants, water pumping installations, oil and gas installations, electric drilling equipment, metal transition platforms, ladders, ladders and fences on the power, pumping, energy, winch drilling systems and drilling mud cleaning systems;

arrangement of concrete pavement under the drilling rig, bases and platforms for spare tanks and clay mixers, fences for moving parts of mechanisms;

performance of earthen, concrete, metalwork, carpentry and loading and unloading operations during the assembly and disassembly of towers and hoists;

installation of anchors for mounting and centering the tower;

the breakdown of the location of the foundations of the foundations of drilling equipment and derrick constructions under the guidance of a higher qualifier;

laying and piping steam and water lines;

lubrication of drilling and process equipment;

preparation of auxiliary equipment for transportation;

assembly, movement and disassembly of drilling rigs for exploration drilling with the towers of all types and structures.

47. Is obliged to know:

purpose of drilling rigs, used mechanisms and equipment;

the purpose of the details of the towers and structural units of the foundations, the foundations and the structures of the towers, the size of the built fences for barns, working sites;

methods of installation, dismantling and transportation of drilling rigs, layout of drilling equipment and communications;

technical characteristics of the mechanisms used in the tool building, placement of instrumentation;

rules for the use of plumbing and carpentry tools;

rules of slinging, lifting and moving small loads, conditional alarm for crane drivers.

Section 19. Drilling Rig Installer, 4 Category

48. Characteristics of the work:

installation, dismantling and transportation of drilling rigs, derrick constructions, mechanisms for raising and lowering towers, equipment of the circulating drilling mud cleaning system, block of spare tanks, power unit and means of mechanization and automation;

breakdown of the location of the foundations of the foundations of the drilling equipment and the foundation of the foundation;

laying and tying exhaust manifolds for diesel engines, participating in the assembly and pressure testing of injection lines and manifolds under the guidance of a higher qualification installer;

centering of the drilling rig, drilling equipment, power equipment and separate blocks of the drilling rig;

management of the construction crew in the assembly, movement and disassembly of drilling rigs for exploration drilling with the towers of all types and structures used in exploration equipment.

49. Is obliged to know:

methods and rules for installation, dismantling and transportation of drilling rigs, the design of the complex of mechanization and automation;

the purpose and technical characteristics of the complex of tripping mechanisms, mechanisms of the circulating system, communications of steam and power supply, power supply, pneumatic system and heating of workplaces and mechanisms;

rules for the production of stroping, rigging works with the use of lifting mechanisms.

Section 20. Drilling Rig Installer, 5 Category

50. Characteristics of the work:

installation and disassembly of: main process equipment, drilling process control panels, slewing cranes, metal frames to cover the drilling unit blocks, automatic drilling tool descent and lifting tools, automation equipment, tire-pneumatic couplings, “A” -shaped towers and tower-type towers up to 45 meters;

lifting and installation of separate blocks of the drilling rig, drilling and power equipment on the foundation;

docking units with the use of lifting vehicles;

assembly and pressure testing of injection lines and manifolds with pressures up to 15 megapascals (up to 150 kilogram-force per centimeter square);

power gear centering;

depreservation and testing of drilling equipment and drilling rigs;

management of the construction crew during the installation, dismantling and transportation of drilling rigs with a rated capacity of up to 100 tons.

51. Is obliged to know:

industrial methods for the construction of drilling rigs of all types;

the design of drilling rigs, drilling equipment, used mechanisms during their installation and dismantling;

communication schemes of high- and low-pressure pipelines, fuel systems, instrumentation and equipment;

methods of mounting and dismounting tire-pneumatic couplings;

methods of centering and testing the equipment used and the derrick;

basic rules for the production of electric welding, electrical installation, stroping and rigging works;

the appointment of hydrocyclone and degassing installations, types of vehicles for transporting large blocks.

Section 21. Drilling Rig Installer, 6 Category

52. Characteristics of the work:

acceptance of the drilling rig in installation and commissioning after installation;

installation and dismantling of “A” -shaped towers and tower towers;

assembly and pressure testing of injection lines and manifolds with pressure over 15 megapascals up to 30 megapascals (over 150 kilogram-force per square centimeter and up to 300 kilogram-force per square centimeter);

binding of the typical layout of the rig equipment to the terrain conditions;

selection of the route of transportation of drilling unit blocks;

placement under the scheme of drilling equipment, transport and lifting equipment and materials;

equipment of the pulley system;

control start-up of the drilling rig;

registration of the relevant documentation for the drilling rig;

management of the construction crew during the installation, dismantling and transportation of drilling rigs with a rated capacity of over 100 tons to 200 tons inclusive.

53. Is obliged to know:

the procedure for receiving the drilling rig in the installation and commissioning after installation;

drilling equipment layout;

rational location of construction equipment at the construction site;

the influence of soil conditions and terrain on the choice of routes and methods of movement of the drilling tower;

hydraulic system of drilling rigs, standard projects for the organization of workplaces and network planning in the construction of drilling rigs;

purpose, device and rules of operation of vehicles for transportation of large blocks.

54. Technical and vocational (secondary special, secondary vocational) education is required.

Section 22. Drilling Rig Installer, 7 Category

55. Characteristics of the work:

acceptance of the drilling rig in installation and commissioning after installation;

installation and disassembly of “A” -shaped towers, tower towers and complicated structures with a height of over 45 meters;

assembly and pressure testing of injection lines and manifolds with a pressure of over 30 megapascals (over 3000 kilogram-force per square centimeter);

binding of the typical layout of the rig equipment to the terrain conditions;

selection of the route of transportation of drilling unit blocks;

placement under the scheme of drilling equipment, transport and lifting equipment and materials;

equipment of the pulley system;

control start-up of the drilling rig;

registration of the relevant documentation for the drilling rig;

management of the construction crew during the installation, dismantling and transportation of drilling rigs with a rated load capacity from 200 tons to 250 tons inclusive.

56. Is obliged to know:

the procedure for receiving the drilling rig in the installation and commissioning after installation;

the layout of the equipment of the drilling rig, the rational arrangement of the construction material and equipment at the construction site;

hydraulic system of drilling rigs, the influence of ground conditions and terrain on the choice of routes and methods of movement of the drilling tower;

typical projects for the organization of workplaces and network planning for the construction of drilling rigs;

order of accounting and reporting on the use of transport and materials;

purpose, device and rules of operation of vehicles for transportation of large blocks.

When installing, dismantling and transporting drilling rigs with a rated load capacity of over 250 tons - 8 category.

57. Technical and vocational (secondary special, secondary vocational) education is required.

Section 23. Drilling Rig Installer -0Welder, 3 Category

58. Characteristics of the work:

electrical and gas welding works during installation, dismantling of drilling and power equipment, transition platforms, metal decking on a drilling rig, groove systems, plating, brackets for laying air ducts, oil lines and pipelines;

gas cutting of profile and high-grade metal covers, containers, frames, sidewalls of covers ;

welding frames of control panels and covers of rotating parts;

laying of free-flow pipelines for water, reagents for bulk materials;

maintenance of electric and gas welding equipment;

installation, transportation and dismantling of drilling rigs.

59. Is obliged to know:

basic properties of metals;

rules for electrical and gas welding operations;

types and devices of used electric and gas welding machines;

the principle of their work and the rules of operation, devices and materials used for welding;

location diagrams of drilling and power equipment, the purpose and technical characteristics of used drilling rigs and equipment;

fundamentals of electrical engineering, methods of installation, dismantling of drilling rigs, rules for slinging, lifting and moving small loads.

Section 24. Drilling Rig Installer -Welder, 4 Category

60. Characteristics of the work:

electric and gas welding works in all spatial positions of the weld during installation and dismantling of drilling rigs, tanks and pipelines of different steel grades;

welding gas exhaust manifolds for diesel engines, fasteners and supports for pipelines, transport carriages, pipelines for external and internal gas supply and heating networks;

gas cutting of pig-iron frames and products;

welding of derricks from profiled steel;

welding shells and cracks in the cast-iron frames and plates;

reading drawings of complex welded metal structures during the initial installation of a drilling rig;

installation and dismantling of the construction of the drilling rig, installation of mechanisms for raising and lowering the tower, blocks of spare tanks and other similar works.

61. Is obliged to know:

the device used electrical and gas welding equipment;

methods of testing welds, types of defects in welds and methods for their elimination;

welding mode, the order of reading drawings of complex structures;

layout of the equipment used and communications, the procedure and rules for installation and dismantling of the drilling rig;

communication schemes steam supply.

Section 25. Drilling Rig Installer –Welder, 5 Category

62. Characteristics of the work:

electrical and gas welding works in all spatial positions of the weld during installation and disassembly:

drilling rigs and boiler houses, load-bearing assemblies of the derrick and foundations, pipelines and manifolds with pressures up to 15 megapascals (up to 150 kilograms-force per square centimeter), made of different steel grades, operating at high dynamic and vibration loads, bases under containers, clay mixers, circulation systems, solution preparation units;

welding of cracks in the hydraulic part of drilling pumps and housings made of cast iron;

welding operations when laying poles of power lines;

laying and tying manifolds;

docking of blocks using trucks and other similar works.

63. Is obliged to know:

electrical circuits and structures used welding machines and units;

technological properties of welded materials, including high-alloy steels;

technological sequence of welding overlaps and welding mode;

technical characteristics of drilling rigs and their purpose, means for installation, dismantling and transportation of drilling blocks and equipment;

drilling rig layout and piping, industrial methods for drilling rig construction.

Section 26. Drilling Rig Installer -Welder, 6 Category

64. Characteristics of the work:

electric and gas welding works in all spatial positions of the weld during installation and disassembly:

technological lines of the drilling rig operating under high pressure and strong vibrations (manifolds, risers), derrick units operating under high dynamic loads, gas pipelines for power drives of drilling rigs, pipelines and manifolds with a pressure of over 15 megapascals (over 150 kilogram-force per centimeter square), cases of heavy diesel engines, air collectors;

installation and dismantling works at the construction of the drilling rig.

65. Is obliged to know:

technology of electric and gas welding;

types of heat treatment of welded joints, basic information on metallography of welds;

types of grooves for welding and the effect of weather conditions on the quality of welds, types of corrosion, factors causing it, and methods of protection;

layout and strapping of drilling and power equipment;

test methods for load-bearing structures in the conditions of the derrick;

technology of installation and dismantling works in the construction of drilling rigs.

66. Technical and vocational (secondary special, secondary vocational) education is required.

Section 27. Drilling Rig Installer -Electrician, 3 Category

67. Characteristics of the work:

installation, assembly, adjustment and delivery of electrical equipment of direct and alternating current up to 100 kilowatts;

assembly and disassembly of group switches for the units for preparation and cleaning of the solution, hydrocyclone installation, systems topping up the well during drilling;

laying of pipes and ducts under the power supply line of the drilling rig;

installation and dismantling of switchboards and electrical cabinets, bus assemblies, rheostats, ground networks, starting controllers;

charging and installing fixtures to illuminate the drilling rig according to an approved scheme;

replacement of bearings in electric motors;

installation, assembly, adjustment and delivery of electrical equipment with a capacity of over 100 kilowatts under the guidance of an installer-electrician of higher qualification;

assembly, disassembly of the drilling unit blocks, transportation of drilling equipment and other similar work.

68. Is obliged to know:

fundamentals of electrical engineering in the amount of work performed;

the purpose and technical characteristics of the main types of electrical equipment of drilling rigs with a capacity of up to 100 kilowatts;

applied test equipment;

layout of electrical equipment and electrical equipment on the rig;

properties of materials used in the installation of electrical equipment, the rules of installation and disassembly of power lines and electric lighting;

methods of installation, dismantling and transportation of drilling rigs.

Section 28. Drilling Rig Installer -Electrician, 4 Category

69. Characteristics of the work:

installation, assembly, adjustment and delivery of electrical equipment of direct and alternating current with a capacity of over 100 kilowatts;

installation of high-voltage switchgear kits on a drilling rig;

installation, disassembly and adjustment of asynchronous motors for the drive of the winch and synchronous motors for the drive of pumps;

installation and adjustment of three-lane AC machines at the switchboard of diesel-electric units, cam controllers for controlling an auxiliary winch electric motor, a control unit for switching current in electric circuits;

marking of conductors and laying of control cables;

installation of plug-in terminals for connecting the control cables;

cable laying along the grooves and blocks with cutting, splicing and mounting of linear terminations and terminal boxes;

adjustment of current relay, time and temperature;

installation of electrical equipment of slewing cranes, secondary switching circuits with relay-contactor control;

installation, dismantling and transportation of derricks, derrick constructions, mechanisms for raising and lowering derricks.

70. Is obliged to know:

device, purpose and technical characteristics of mounted electrical equipment with a capacity of over 100 kilowatts;

wiring diagrams for electrical equipment, electrical circuits for power supply of a drilling rig;

the sequence of installation of electrical equipment, instrumentation and control gear;

electrical switching, methods for checking the correctness of the inclusion of electrical circuits;

methods and rules for installation, dismantling and transportation of the drilling rig.

Section 29. Drilling Rig Installer - Electrician, 5 Category

71. Characteristics of the work:

installation, disassembly, testing and assembly of high-voltage equipment;

disassembly and assembly of electrical circuits of the secondary switching and relay protection at the stations for monitoring the drilling process, bit feed regulators, automatic tripping machines;

installation of control gears in brake circuits of the main drive of the winch, limit switches and magnetic starters;

connection according to the scheme of asynchronous and synchronous electric motors, power and control cables, and installation of secondary switching circuits with relay-contactor and thyristor control;

installation and testing of remote-control circuits;

installation of power transformers, automatic tripping, asynchronous and synchronous motors;

detection of defects and damages in electrical circuits of electrical equipment during installation;

running in electrical equipment and putting it into operation;

installation and dismantling of control panels for the drilling process, re-activation and testing of electrical equipment.

72. Is obliged to know:

wiring diagrams for high-voltage electrical equipment;

equipment and devices of direct and alternating current with complex schemes of inclusion, technical characteristics of electrical equipment of drilling rigs;

reading electrical circuits and drawings when placing equipment, methods for measuring resistance and insulation values;

calculations of ground loops for equipment mounted on the rig, and for individual equipment;

mounted outside the drill, methods of splicing cables and terminating high-voltage sleeves ;

design of drilling rigs, drilling equipment.

Section 30. Swabbing Unit Operator

73. Characteristics of the work:

servicing the swabbing unit in the course of work in the process of calling and stimulating fluid flow during the development of new production wells and wells brought out of conservation or liquidation, as well as with an increase in the flow rate of the existing ones;

preparation of the swabbing unit for work;

participation in the preparatory and final works, installation and dismantling of the swabbing unit, in the equipment of the pulley system, in the installation and maintenance of auxiliary mechanisms;

winch control during tripping operations;

control of the power generator installed on the swabbing unit, control and management of the modes of operation of the vehicle, power unit and other systems of functioning of the swabbing unit;

participation in wellhead equipment;

monitoring the operation of the mechanisms of the swiveling unit; keeping a log of the work of the swiveling unit;

driving a car or a tractor, filling them with fuel, lubricants and coolant;

check of the technical condition and reception of the installation at the beginning of the work shift;

production of the current repair of installation mechanisms, automobile, tractor;

elimination of minor operational malfunctions arising during the operation of the installation that do not require disassembly of mechanisms.

74. Is obliged to know:

technological process of extraction of oil, gas and other minerals;

well construction;

technological process and types of work for the development of wells;

technical characteristics and operating rules of a tractor-hoist, a mobile unit, used mechanisms, devices, tacking systems;

brands and grades of fuels and lubricants;

fundamentals of electrical engineering and plumbing in the volume of work performed;

methods of repairing the engine, transmission and chassis of the lifting winches;

Traffic Laws;

industrial safety requirements for the device and safe operation of lifting mechanisms.

When swabbing wells up to 1500 meters in depth inclusive - 5 category.

When swabbing wells over 1500 meters of directional wells, regardless of their depth and wells with complicated geological conditions, the 6 categories. dis

75. Requires technical and vocational (secondary special, secondary vocational) education

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Section 31. Driller's Assistant for Production and Exploratory Well Drilling During Electric Drilling

76. Characteristics of the work:

maintenance of electrical equipment, sectional cable wiring, electric drills using telemetry systems, telecontrol (remote control) drilling and other types of electrical equipment on drilling rigs while drilling wells for oil, gas, thermal, iodine-bromine waters and other minerals;

inspection and verification of electric drill, current collector, current lead and troubleshooting;

adjustment of the automatic regulator of the bit feed to the face and the electric drill control stations;

change of cable sections in drill pipes, working rod, submersible electromagnetic contactor, safety working sub;

monitoring the proper technical operation of the electrical power supply, electric drills using telemetry systems, current collectors, protection devices for electric drills using chips and other special ground electrical equipment;

measurement of insulation value of electric drill, control of oil pressure;

oil injection into the electric drill;

during the descent of the drilling tool cleaning contact joints and insulation measurement current supply;

adjustment with the help of a voltage transformer of a downhole motor (electric drill), depending on the depth of the well;

keeping a shift log and recording the consumption of special materials to ensure uninterrupted operation when drilling with an electric drill;

manual change of electric drills, devices for means of control of insulation and ring current collector, work of electricians on maintenance and repair of electrical equipment at drilling rigs, installation and dismantling of electrical equipment, including special electrical equipment for drilling wells with electric drills using telemetric systems and remote monitoring of drilling wells.

77. Is obliged to know:

the technological process of drilling wells for oil, gas, thermal, iodine-bromine waters and other minerals;

fundamentals of electrical engineering, the device of electric motors of direct and alternating current, transformers, electric drills of all kinds;

current supply and all special electrical equipment, wiring diagrams and technical characteristics of serviced installations and mechanisms;

control circuit of electric drill and chisel feeder;

power supply and illumination lighting scheme, manual for electric drill, current lead, design and principle of operation of the built-in orientation machine for drilling inclined wells and manual for operation and maintenance of this device, technical rules for installation, repair, revision and operation of drilling equipment, air and cable networks, grounding device and its purpose;

ways to increase power factor and ensure efficient use of electricity.

When drilling wells up to 1500 meters inclusive - 4 category;

when drilling over 1500 meters - 5 category.

Section 32. Wellbore Testing Operator, 4 Category

78. Characteristics of the work :

conducting the process of testing wells under the guidance of an operator for testing wells of higher qualification;

disassembly, washing tester after each operation;

checking the condition of threaded connections, the interaction of parts and the state of gland seals;

repair or replacement of parts and restoration of seals;

assembly and pressure testing of the formation tester;

check of packers, check of tightness of packer;

assembling a set of test tools, selection of drill pipes;

observation of the descent and ascent of the plastipatel during the passage of the landing intervals;

fluid sampling;

participation in the installation of blowout equipment at the wellhead.

79. Is obliged to know:

the geology of the field, the technological process of drilling wells for oil, gas and other minerals and testing wells;

the purpose, device, technical characteristics of the formation tester and sampler, the order of their assembly and disassembly;

installation schemes for blowout equipment at the wellhead;

types, size of drill pipes and tubing, types of threads, types and sizes of packers, causes of oil and gas showings, plumbing.

Section 33. Wellbore Testing Operator, 5 Category

80. Characteristics of the work:

conducting the process of testing formations;

checking the status of the discharge line;

preparation of the tool needed to work with the reservoir tester at the rig;

checking the tightness of individual sections of the column, participation in the installation of cement bridges and their pressure testing;

participation in liquidation of accidents with reservoir testers and samplers;

monitoring the state of the equipment, tools and instrumentation used.

81. Is obliged to know:

the geology of the field, the technological process of drilling oil, gas and other minerals;

technology and methods of testing (testing) wells;

the magnitude of the compressive loads required for well packing;

permissible tensile loads for formation testers;

work on the preparation of wells for testing, causes of problems that arise when working as a reservoir tester and sampler, and how to eliminate them.

Section 34. Wellbore Cementing Operator, 3 Category

82. Characteristics of the work:

maintenance of the cement mixing machine and regulation of its work in the preparation of cement mortar and cementing;

installation and disassembly of screws;

organization of work on the sorting of cement and sending it to the drilling.

83. Is obliged to know:

physical and chemical properties of grouting cements;

device, technical characteristics of cement-mixing machines;

technology for the preparation of cement mortar using cement-mixing machines;

methods for determining the quality of cement, requirements for cement cements, cement-based solutions used to combat complications.

Section 35. Wellbore Cementing Operator, 4 Category

84. Characteristics of the work:

participation in conducting the process of cementing wells up to 4000 meters deep and hydraulic fracturing;

assembly, disassembly, piping of injection lines with units and wellhead fittings;

pressure testing of low- and high-pressure lines;

installation of a cementing head and pressure gauges, monitoring the work and readings of recording devices;

laying a plug in the cementing head;

opening and closing valves on the cementing head and regulating the water supply and the squeezing fluid by the unit;

water preparation with retarders or accelerators for setting cement;

supervision over the work of feed screws, the consistency of the feed mixture;

participation in the preventive and maintenance repairs of the cement mixing machine.

85. Is obliged to know:

technological process of cementing and hydraulic fracturing;

technical characteristics and purpose of cement-mixing and cementing units;

methods for the preparation of cement mortar and methods for regulating the consistency of the solution;

the duration of the casting, depending on the brand of cement used, the temperature and depth of the well, the reasons for the failure of cementing and hydraulic fracturing, and measures to prevent and eliminate them, plumbing in the amount of work performed.

When working on wells with a depth of more than 4,000 meters - 5 category.

Section 36. Cement Control Station Operator-Mechanic, 5 Category

86. Characteristics of the work:

maintenance of cement control station;

receiving a source of radiation from the storage and installing it on the cementing control device;

verification of the reliability of mounting flange connections, flowmeter sensors, density meter and pressure sensor;

participation in the connection of communication cables of cementing units and cement mixing machines with the station and manifold;

ensuring the accuracy of the recorded parameters;

check of reliability of fastening of plug-in connectors;

cable connection to the sensor box of cement control instruments;

driving a car, refueling, carrying out preventive and current repairs of the station, car.

87. Is obliged to know:

technological process of cementing wells, hydraulic fracturing;

chemical treatment of wells, purpose and technical characteristics;

rules for controlling the cement control station;

connection diagrams of devices, cementing and cement mixing machines, remote units;

sanitary rules for working with radioactive substances and radiation sources;

fuels and lubricants;

ways to prevent and troubleshoot the station and the car, the rules of the station.

Section 37. Cement-Sand Mixing Unit Operator

88. Characteristics of the work:

maintenance of cement-mixing or sand-mixing unit during the cementing of wells, hydraulic fracturing, water-jet perforation and work on the intensification of oil production wells gravel filters and equipment;

participation in the process of cementing wells, hydraulic fracturing, water-jet perforation, in the alluvium of gravel material;

transfer of process fluid (without pressure);

troubleshooting occurring during the operation of the cementing unit, ensuring the normal operation of the engines of the unit;

driving a car, refueling;

execution of documentation for the work performed;

maintenance of equipment for cement trucks.

89. Is obliged to know:

technological process and purpose of well cementing, hydraulic fracturing, water jet perforation and work on the intensification of oil production;

the purpose, design, technical characteristics and operating rules of a cement mixing or sand mixing unit, a device;

interaction and principle of operation of units of units, the nature of possible malfunctions of units;

measures for their prevention and elimination, the installation of cement trucks, plumbing, basic information about the technology of workover and well development, well arrangement with bottomhole equipment.

When working on cement-mixing units and sand-mixing aggregates with the systematic use of aggregates only for sand-mixing works - 5 category;

when working on cement-mixing units and sand-mixing units, while simultaneously mixing and pumping the solution during hydraulic fracturing - 6 category.

90. Technical and vocational (secondary special, secondary vocational) education is required.

Section 38. Cementing Unit Operator

91. Characteristics of the work:

maintenance of power and process equipment and chassis of cementing units during the cementing wells, hydraulic fracturing, chemical well treatment;

preparation of the cementing unit for work at the facility;

assembly, disassembly, piping and crimping of high- and low-pressure lines;

participation in the process of well cementing, hydraulic fracturing, chemical, heat treatment, well killing and flushing, installation of cement bridges;

participation in pressure testing of casing and drill pipes, manifolds;

ensuring the normal operation of the engines of the cementing unit;

determination of the end of cementing;

transfer of process fluid (without pressure);

monitoring the flow rate of fluid injected into the well;

troubleshooting arising during the operation of the cementing unit;

driving a car, refueling;

production of preventive and current repairs of the cementing unit and the car;

registration of documentation for the work performed.

92. Is obliged to know:

the process of drilling wells and oil, gas and other minerals;

technical characteristics, purpose, design;

rules of operation of the cementing unit, car, device, interaction and principle of operation of all units of the unit;

the process of well cementing, hydraulic fracturing, chemical treatment, washing and killing wells;

types of repairs of the cementing unit, plumbing, basic information about the technology of workover and well development.

When working on cementing units with pressures up to 15 megapascals (up to 150 kilograms-force per square centimeter) inclusive - 5 ategory;

when working on cementing units with a pressure of over 15 megapascals (over 150 kg-force per square centimeter) - 6 cateory.

Chapter 3. Occupational Characteristics of Oil and Gas Production Workers by Categories

Section 1. Gas Collection Operator, 2 Category

93. Characteristics of the work:

maintenance of separators, gas pipelines, gas distribution devices and other gas facilities under the guidance of a higher qualification gas collection operator;

bypassing gas facilities and checking their condition, eliminating malfunctions in the operation of equipment;

purging separators and gas pipelines;

monitoring the level of fluid in the separators;

participation in maintenance of equipment and equipment, replacement of faulty valves, replacement of gaskets, packing glands;

ensuring technical serviceability of gas wells;

performance of simple plumbing work.

94. Is obliged to know:

basic information on the technology of production, collection and transportation of oil, gas and condensate;

main explosive properties of mixtures, their toxicity;

the purpose, design and rules for servicing separators, pressure gas pipelines, gas distribution devices, shut-off devices, safety, check and control valves, pressure and level regulators, and other applied instrumentation.

Section 2. Gas Collection Operator, 3 Category

95. Characteristics of the work:

maintenance of separators, gas pipelines, gas distribution devices and other gas facilities;

taking preventive measures to prevent the ingress of oil into gas gathering networks, the formation of hydrate and liquid traffic jams in gas pipelines, increase the pressure drop across gas pipeline sections, reduce gas process losses, and process switch gas flows;

sampling gas to determine the content of hydrogen sulfide;

determination of the thickness and quality of insulation of the walls of the apparatus and gas pipelines;

maintenance of air and cable lines of the remote-control system in working condition;

metal corrosion control;

gas pipe shuffling;

performing routine repair of serviced equipment, equipment;

keeping logs of equipment and gas pipelines, gas production and use, technological gas losses.

96. Is obliged to know:

technological processes of oil and gas production, oil and gas separation, gas-assembling communications scheme, gas properties, used inhibitors, features of collecting and transporting hydrogen sulfide gas;

methods for determining the gas factor, process gas losses, the causes of hydrate formation in gas gathering networks and pressure gas pipelines and methods of dealing with them;

technical characteristics, rules for servicing and maintaining normal technological operation of gas facilities;

equipment and apparatus, technical characteristics and device used instrumentation, means of automation and remote control.

Section 3. Gas Collection Operator, 4 Category

97. Characteristics of the work:

maintenance of group installations, booster pumping stations, end stages of separation, assembly points and goods parks, output to a given technological mode of operation of automated equipment;

control over the work and adjustment of basic automation equipment;

organization and participation in the repair of ground and underground equipment and communications, shut-off, shut-off, safety and control valves;

implementation of technical and technological measures to reduce gas and condensate losses, improve technological processes for collecting, preparing and transporting gas;

air sampling and gas analysis using gas analyzers;

leadership of the link, the brigade.

98. Is obliged to know:

the characteristics of the field being developed, the purpose and arrangement of surface equipment, wells, oil and gas separation points;

technological scheme of collecting and transporting gas and gas condensate;

methods for determining the gas factor, the operation of pressure and level regulators, oil cutoffs, instrumentation, instruments for monitoring the insulation of gas pipelines;

the procedure for conducting flammable and gas hazardous work at separation points and gas pipelines;

principle of operation of centrifugal and screw pumps, especially the collection and use of high-sulfur gas oil, the properties of methanol, inhibitors and gases.

Section 4. Flushing Unit Operator

99. Characteristics of the work:

maintenance of flushing and acid units mounted on a tractor or car chassis;

preparation of the flushing unit for work at the facility, piping (connection) of the unit with the wellhead according to the technological scheme;

assembly and disassembly, piping and crimping of high- and low-pressure lines;

maintenance of the mechanisms for washing, pressure testing and drainage of the bottom hole;

injection of chemicals, acids and alkalis used for the treatment of wells;

participation in the process of chemical processing of the well bottom zone and carrying out cement works;

monitoring the flow of drilling mud, chemicals and the operation of the mechanisms of the unit;

driving a car or tractor;

refueling a car or tractor;

production of the current repair of the flushing unit, car or tractor.

100. Is obliged to know:

device and rules of operation of the vehicle or tractor, flushing pump, fittings and equipment of wells, the technological process of washing, pressure testing of wells;

chemical injection (acids and alkalis into the well), physicochemical properties of drilling mud, chemicals, acids, alkalis;

rules for handling them, plumbing in the amount of work performed.

When working on flushing and acid units with a working pressure of up to 10 megapascals (up to 100 kilograms-force per square centimeter) inclusive - 4 category;

when working on flushing and acid units with a working pressure of over 10 to 35 megapascals (over 100 kilograms-force per centimeter square to 350 kilograms-force per square centimeter) inclusive - 5 category;

when working on flushing and acid units with a working pressure of over 35 megapascals (over 350 kilogram-force per centimeter square) - 6-category.

101. Technical and vocational (secondary specialized secondary vocational) education is required.

Section 5. Pumping Station Operator for the Injection of the Working Substance into the Reservoir

102. Characteristics of the work:

servicing technological equipment: cluster pumping stations, block cluster pumping stations and electric centrifugal submersible units for pumping fresh, highly mineralized wastewater, water distribution devices, water collection and treatment plants, air-cooled oil system, automatic ventilation systems;

monitoring the uninterrupted operation of pumps and electric motors and taking the necessary corrective actions;

maintaining a given mode of injection of water into the reservoir for each well;

participation in the installation and dismantling of equipment;

treatment with process liquid or water reagents in order to reduce corrosivity or increase oil-bearing and oil-driving properties;

monitoring the operation of instrumentation;

manufacture of the current repair of the serviced equipment;

logging of water injection through wells, log of the equipment serviced and power consumption.

103. Is obliged to know:

the purpose, rules of operation and maintenance of pumps, air coolers and automatic ventilation systems, electric motors, equipment of a pumping station, used instrumentation and automation equipment;

technological mode of injection of the working agent for individual wells, the scheme of connecting the well to the pressure pipelines;

the piping scheme of the serviced pumping station and pipelines, the main chemical properties of the reagents used, fresh highly mineralized wastewater;

rules for the safe conduct of work in the maintenance of the system for collecting and preparing wastewater, the design of personal protective equipment and the rules for their use

When servicing pumping stations with the number of operating units less than 4 or with a water injection volume of up to 2.7 thousand cubic meters per day inclusive - 3 category;

when servicing pumping stations with the number of operating units from 4 to 6 inclusive or with a volume of water injection from 2.71 to 7.2 thousand cubic meters per day inclusive - 4 category;

when servicing pumping stations with a number of operating units over 6 or with a volume of water injection over 7.2 thousand cubic meters per day - 5 category.

Section 6. Steam Mobile Dewaxing Installation Operator

104. Characteristics of the work:

preparation of a steam mobile dewaxing unit or unit for operation at the facility;

technological process for the dewaxing of oil wells, discharge lines, oil-gathering plants, heating of water lines and other field processing facilities with steam;

piping units with wells, field processing units;

laying lines for dewaxing or heating with steam or hot oil;

monitoring the operating parameters of the boiler or oil heater, engine, instrumentation and all auxiliary mechanisms of the serviced unit, steam mobile dewaxing installation, installation and dismantling of equipment, instrumentation and instrumentation installation, performing preventive and maintenance of equipment, maintaining a log installation work;

driving a car.

105. Is obliged to know:

technological process of oil and gas production;

physical and chemical properties of oil, steam and paraffin;

oil well operation methods, wellhead piping schemes, device and installation operation rules, serviced unit, main and auxiliary equipment;

instrumentation, used instrumentation, car;

technological regime and process of dewaxing oil wells with steam or hot oil, discharge lines and oil gathering plants, plumbing in the amount of work performed.

When servicing under the guidance of the driver of a steam mobile dewaxing plant of higher qualification - 3 category;

when servicing steam mobile dewaxing plants and units mounted on the vehicle chassis, with a working steam pressure of up to 10 megapascals (up to 100 kilograms-force per square centimeter) inclusive - 5 category;

when servicing steam mobile dewaxing installations with a working vapor pressure of over 10 megapascals (over 100 kilogram-force per square centimeter) – 6 categories.

106. Technical and vocational (secondary specialized, secondary vocational) education is required.

Section 7. Mobile Compressor Operator

107. Characteristics of the work:

maintenance of a mobile compressor unit, start and stop of the compressor, diesel;

laying of communications, connecting them to the compressor unit and the wellhead;

work to enhance the outflow of fluid from the well by creating a depression at the bottomhole, monitoring the flow of fluid (oil);

adjustment of the air supply during the heat treatment of the well bottom zone;

participation in the opening of productive layers using gaseous agents and the elimination of complications in drilling;

adjustment of operating modes of the compressor unit and diesel engine according to the indications of instrumentation;

monitoring the operation of all mechanisms and systems of a mobile compressor unit, establishing the main parameters of the unit in accordance with the technological regulations for drilling and testing (development) of wells;

identification and elimination of defects in the operation of a diesel engine, a compressor, and maintenance of current repairs of all the systems of a compressor installation, including emergency protection systems, paperwork for the production of works and maintenance of a log of the installation work;

driving a car.

108. Is obliged to know:

the methods of operating oil, gas and injection wells;

the purpose, design and operating rules of various systems of compressors, power equipment, automobiles, instrumentation and automatic protection of a compressor unit;

types of fuel, lubricants and cooling, methods of detecting and eliminating malfunctions in the operation of a mobile compressor unit;

schemes for connecting communications from the compressor unit to the well, the consumption rate of operating materials for the production of compressed air;

basic information on heat engineering, electrical engineering, drilling and production equipment, drilling technology, testing (development) and overhaul of oil and gas wells;

plumbing in the amount of work performed.

When working in exceptional cases (in wells emitting free hydrogen sulfide, wells with high wellhead pressure and others) on trailed or self-propelled mobile compressors under the guidance of a driver of a higher-quality mobile compressor;

when working on a trailed mobile compressor with a working pressure of up to 10 megapascals (up to 100 kilogram-force per centimeter square) inclusive - 4 category;

when working on a trailed mobile compressor with a working pressure of over 10 to 20 megapascals (over 100 kilogram-force per centimeter square to 200 kilogram-force per centimeter square) inclusive or on a self-propelled mobile compressor with a working pressure of up to 10 megapascals (up to 100 kilogram-force per square centimeter) inclusive - 5 category;

when working on a trailed mobile compressor with a working pressure of over 20 megapascals (over 200 kilogram-force per centimeter square) or on a self-propelled mobile compressor with a working pressure of over 10 megapascals (over 100 kilogram-force per centimeter square) - 6-category.

Section 8. Winding Engine Operator

109. Characteristics of the work:

maintenance of the lift (unit) in the process of work on the capital, current repair and testing (testing) wells;

preparation of the lift (unit) to work;

participation in the preparatory and final works, installation and dismantling of the lift, in the equipment of the pulley system, in the installation and maintenance of auxiliary mechanisms used in the overhaul of wells (pumping unit, machine and hydraulic keys, preventer hydraulic lines and other equipment from the installation hydraulic system);

winch control for all tripping operations;

control of the power generator installed on the lift (unit);

participation in work on overhaul and underground repair of wells, in works on testing and equipping the wellhead;

monitoring the operation of the recorder and the mechanisms of the lift (unit);

keeping a log of work of the lift (unit);

driving a car or tractor, refueling them;

the production of the current repair of the mechanisms of the lift (unit), car, tractor;

maintenance of mobile power stations with a capacity of up to 100 kilowatts.

110. Is obliged to know:

technological process of extraction of oil, gas and other minerals;

well design, technological process and types of work on well testing;

technical characteristics and operating rules of a tractor-hoist, a mobile unit, used mechanisms, devices, tacking systems;

technological process and types of capital, current repairs, methods of testing wells, brands and varieties of fuel and lubricants;

fundamentals of electrical engineering and plumbing in the volume of work performed, methods of repair of the engine, transmission and chassis of the lifting winches.

During the work on wells of I category of complexity and up to 1500 meters in depth inclusive - the 5 categories;

when working on wells of the II category of complexity and a depth of more than 1,500 meters to 4,000 meters inclusive - 6 category;

when working on wells with a depth of 4,000 meters to 6,000 meters, inclusive, as well as directional wells with a depth of more than 1,500 meters - 7 category;

when working on wells over 6000 meters - 8 category.

111. Technical and vocational (secondary special, secondary vocational) education is required.

Section 9. Reservoir Pressure Maintenance Operator, 3 Category

112. Characteristics of the work:

maintenance of equipment of injection wells operating at pressures up to 10 megapascals (up to 100 kilograms-force per centimeter square) and water injection volume up to 3,600 cubic meters per day;

condensate drain from moisture separators, monitoring the wellhead equipment of injection wells, moisture separators, and participation in their repair;

monitoring the battery condition in distribution boxes;

systematic bypassing the main and working pipelines and injection wells, monitoring the health of their condition and participation in the repair;

participation in works to increase well capacity;

monitoring the readings of recording devices and keeping records of testimony;

participation in the installation and dismantling of pipelines;

sampling from injection wells and water lines;

keeping a shift log of working agent injection into the reservoir.

113. Is obliged to know:

characteristics of the developed field and methods of its operation;

methods of reservoir pressure maintenance, purpose and rules of operation of equipment for the main conduits of injection wells;

main requirements for the quality of water, gas and air pumped into the formations;

piping wiring diagram, distribution battery device, basic information about the device and purpose of instrumentation (flow meters, water meters, pressure gauges and others).

Section 10. Reservoir Pressure Maintenance Operator, 4 Category

114. Characteristics of the work:

maintenance of equipment of injection wells operating at pressures from 10 to 12.5 megapascals (from 100 kilograms-force per centimeter square to 125 kilograms-force per centimeter square) and the volume of water injection from 3,600 to 7,200 cubic meters per day;

participation in the work of restoring and maintaining the injection wells;

regulation of the supply of working agent in the well;

participation in the installation, dismantling and maintenance of ground equipment injection wells;

participation in the work of establishing the mode of injection wells, distribution devices;

elimination of minor malfunctions in means of protective automatics and instrumentation at distribution points.

115. Is obliged to know:

technological process of extraction of oil, gas and gas condensate;

the main methods for the study of injection wells;

detailed piping connection scheme, device, purpose, maintenance rules for equipment of injection wells and applied instrumentation.

Section 11. Reservoir Pressure Maintenance Operator, 5 Category

116. Characteristics of the work:

maintenance of equipment of injection wells operating at a pressure of 12.5 megapascals (125 kilograms-force per centimeter square) and more, and a water injection volume of over 7,200 cubic meters per day, distribution devices and water lines;

work on the restoration and maintenance of injection wells;

performance of instrumentation and commissioning work at the injection points;

control over the operation of pipelines protection equipment and well equipment against corrosion;

participation in the preparation of injection wells for overhaul and maintenance;

receiving injection wells from the repair, development and commissioning of them;

control over the work of automation, remote control and instrumentation;

control over keeping a shift log and primary documentation on the accounting of a working agent injection;

management of the watch.

117. Is obliged to know:

characteristics of the developed field;

systems of influence on the oil reservoir, the purpose and device of underground and surface equipment;

piping of the pumping station, distribution devices, injection wells;

types of current and capital repairs of injection wells;

methods of increasing the injectivity of wells;

development and research of injection wells;

purpose, device, rules of operation of automation systems, remote control, software devices.

Section 12. Hydraulic Fracturing Treatment Operator, 5 Category

118. Characteristics of the work:

conducting the process of hydraulic fracturing and hydraulic sandblasting perforation under the guidance of the operator on hydraulic fracturing of higher qualification;

preparation of equipment for hydraulic fracturing at pressures up to 70 megapascals (up to 700 kilograms-force per centimeter square);

assembly, disassembly of high pressure lines;

measurement of the amount of injected fluid;

regulation of the flow of fluid and sand to the pump unit's receptions;

installation of instruments at the wellhead, their connection with wellhead fittings, monitoring the operation of instruments in the process of hydraulic fracturing, maintenance and production of preventive maintenance of instruments and equipment;

preparation of the equipment for carrying out hydroperforated perforation.

119. Is obliged to know:

device and operation rules of wellhead equipment of wells operating at high pressure, used mechanisms, tools and instrumentation;

well design, hydraulic fracturing process;

physical properties of the reservoir, basic information about the movement of oil and gas to the bottom of a well;

regime of oil and gas fields, methods of influence on the reservoir, wellhead piping, preparation of fracturing fluids.

Section 13. Hydraulic Fracturing Treatment Operator, 6 Category

120. Characteristics of the work:

conducting the process of hydraulic fracturing at a pressure of over 70 megapascals (over 700 kilogram-force per square centimeter) and a hydraulic sandblasting perforation;

installation of cartograms and observation of the readings of the recording electronic flow meter and pressure gauge;

maintenance and repair of wellhead piping fittings.

121. Is obliged to know:

equipment piping and wellhead layout with various technological schemes of hydraulic fracturing and hydro-sand blasting perforation;

composition and methods of preparation of injected fluids and sandbags;

calculation of the required amount of fluid and sand, the technical characteristics of equipment and instrumentation used in hydraulic fracturing.

Section 14. Operator of Units for Servicing Oil and Gas Equipment, 5 Category

122. Characteristics of the work:

servicing the unit for servicing the oil and gas field equipment mounted on the chassis of a vehicle with a carrying capacity of up to 5 tons or on the basis of a tractor with an engine capacity of up to 73.5 kilowatts (100 horsepower), including preparing the unit for operation at the facility assembly and repair of ground oilfield equipment;

installation, dismantling of the discharge and filling lines, high-pressure gun, subs and their connections to the pump discharge, solid fuel pump;

check of reliability of fastening of coupling joints;

connecting and disconnecting the electrical equipment of the unit from the field electrical network, checking the reliability of the contacts and grounding of the electrical equipment of the unit;

maintenance of equipment for the mechanized release of the gearbox from waste oil, washing the gearbox crankcase, filling the gearbox with fresh engine oil and filling the bearing units with contact grease;

monitoring the operation of the compressor unit and the solid fuel compressor;

the maintenance of all units and mechanisms of the unit in working condition;

driving a car, tractor;

production of the current repair of the car, tractor and machine mechanisms.

123. Is obliged to know:

the design and operation of the car, tractor, lifting mechanisms, mechanized equipment for liquid and grease;

electrical equipment and equipment for gas cutting and welding, mounted on the unit servicing oil and gas equipment;

technological process of washing, used lubricants, rules for technical operation of cars, tractors, signs, causes and methods for detecting and eliminating faults of a car, tractor and special equipment installed on them, plumbing in the amount of work performed.

When working on units for servicing oil and gas field equipment mounted on the chassis of a vehicle with a carrying capacity of more than 5 tons or on the basis of a tractor with an engine power of over 73.5 kilowatts (100 horsepower) – 6 category.

124. Technical and vocational (secondary special, secondary vocational) education is required.

Section 15. Steam Generator Installation Operator for Steam Injection into the Oil Reservoir, 5 Category

125. Characteristics of the work:

conducting the process of generating steam and pumping it into the reservoir using instrumentation, as well as monitoring the operation of the automatic control system and protection;

maintenance of steam generator installations for steam injection into oil reservoirs;

directing the transfer of the installation from a stationary to a dynamic state, work on the laying of steam pipelines to the wells, installation of wellhead equipment and downhole equipment;

checking the correctness of the connection of the pipeline to the fuel system and the feed line to the water treatment unit;

the inclusion in the work of the fuel system of pumps: chemical water treatment, water supply to the deaerator, booster and main feed pumps;

control and regulation of fuel combustion, work of water cleaning and thermal deaeration of drinking water;

preventive repair of the steam generator installation for steam injection into oil reservoirs, participation in the conduct of medium repair of the installation equipment;

logging of installation work.

126. Is obliged to know:

thermal scheme of steam generator installations for steam injection into oil reservoirs;

system of automatic regulation and protection of all equipment;

the design of the steam generator, deaerator, fuel system, nutrient and booster pumps, water cleaning and other installation units;

rules of start-up, operation and shutdown of the steam generating installation;

design of wellhead equipment and downhole equipment, the rules for its installation and operation, technical operation during operation of the equipment and technological modes of thermal effects on oil reservoirs, plumbing in the amount of work performed, basic information about the oil field and methods of its operation;

physical properties of oil, secondary methods of oil production, ways to increase the productivity of oil wells, underground repair of wells, field facilities, types of transportation of oil and gas in the fields.

When working under the guidance of a steam generator installation driver for steam injection into oil reservoirs of higher qualification – 4 category.

Section 16. Oil and Gas Extraction Control Panel Operator

127. Characteristics of the work:

control over the technological process of oil, gas and gas condensate production in the field and remote control of the technological process of measuring the production of oil, gas and gas condensate using automation and telemechanics;

start and shutdown of installations and mechanisms;

the implementation of the collection, processing and transmission of information from wells (including injection) and from group metering units;

control over the operation of the existing well stock through the control panel and information of service operators;

preparation and transfer of information on work performance and emergency situations to the field and the central technological service;

transfer of the application for the necessary special equipment and transport to the central engineering and technological service;

drawing up reports on the work of wells and the delivery of products, the movement of teams of underground and workover of wells;

carrying out work under the direction of the engineering and technological service of the field and obtaining operational instructions from the central engineering and technological service of the oil and gas producing department;

maintenance of rotational documentation on changing the mode of operation of wells and the work being done at the oil field facilities;

management of operators of oil and gas production, start-up and shutdown of wells.

128. Is obliged to know:

characteristics of the developed field;

technological process of extraction of oil, gas and gas condensate;

methods of well development and the intensification of oil and gas production, the purpose and characteristics of underground and surface equipment;

types of capital and underground well repair and well research methods;

technological schemes for the collection, transportation, accounting and treatment of oil, gas and gas condensate;

schematic and wiring diagrams of servicing equipment, automation and telemechanics, the foundations of telecontrol and remote control, telemechanics and software devices;

purpose of used instrumentation, basic electrical engineering.

When working in non-automated fields - 4 category;

when working on automated fields - 5 category.

Section 17. Oil and Gas Production Operator, 3 Category

129. Characteristics of the work:

participation in the implementation and maintenance of a given mode of operation of wells, gas treatment plants, group metering units, booster pump and compressor stations, stations for underground gas storage and in other works related to the technology of oil, gas, gas condensate production by various methods of operation;

participation in maintenance and repair of oilfield equipment, installations and pipelines;

readings of instrumentation;

sampling for analysis;

participation in oil and water measurements through metering stations of the booster pumping station, group measuring installations.

130. Is obliged to know:

design of oil and gas wells;

assignment, rules for maintenance of surface equipment wells;

tools used, devices, instrumentation, basic information about the technological process of extraction, collection, transportation of oil, gas, gas condensate, gas injection and gas extraction, the main chemical properties of the reagents used, the principle of personal protective equipment.

Section 18. Oil and Gas Production Operator, 4 Category

131. Characteristics of the work:

technological process management with all methods of oil, gas and gas condensate production, maintenance, installation and disassembly of equipment and mechanisms under the guidance of a higher qualification oil and gas production operator;

implementation of work to maintain a given mode of operation of wells, gas treatment plants, group metering units, booster pump and compressor stations, stations for underground gas storage and other facilities related to the technology of oil, gas and gas condensate production and underground gas storage;

disassembling, repairing and assembling individual units and mechanisms of simple oil field equipment and valves;

cleaning of tubing in the well of paraffin and tar with mechanical and automatic scrapers and using reagents, solvents, hot oil and steam;

steam treatment of high pressure underground and surface equipment of wells and discharge lines;

measurement of well production at an automated group metering unit;

decoding the readings of instruments of control and automation;

submission of information to the work manager and operator about any problems observed in the operation of wells and other oilfield equipment;

maintenance of gas-lift well communications (gas manifolds, gas separators, heat exchangers) under the guidance of a higher qualification oil and gas production operator;

readings of instruments measuring the parameters of the gas pipeline, calculation of gas and liquid consumption, maintenance of work sheets; installation of complex gas treatment at the workshop.

132. Is obliged to know:

basic information about the oil and gas field;

purpose, rules of operation and maintenance of surface equipment of wells and installations, used tools and devices, instrumentation;

the technological process of extraction, collection, transportation of oil, gas, gas condensate, gas injection and extraction, the scheme of collection and transportation of oil, gas and condensate in the service area;

device serviced instrumentation, machinery, automation and remote control equipment.

Section 19. Oil and Gas Operator, 5 Category

133. Characteristics of the work:

technological process for all methods of oil production, gas, gas condensate, gas injection and gas extraction and ensuring uninterrupted operation of wells, gas treatment plants, group metering units, booster pump and compressor stations, underground gas storage stations and other oil field equipment and facilities;

participation in the development of wells, bringing them to a given mode;

pressure testing of pipelines, process equipment;

installation, dismantling, maintenance and repair of ground field equipment, installations, mechanisms and communications;

carrying out preventive work to prevent hydrate formation, wax deposits, resins, salts and the calculation of reagents for these works;

measurement of values of various technological parameters using instrumentation;

removal and transmission of well operation parameters, control over the operation of automation and remote control equipment;

participation in well survey work;

maintenance of gas lift wells communications (gas manifolds, gas separators, heat exchangers);routine maintenance of pumping equipment.

134. Is obliged to know:

basic information about the oil and gas field;

reservoir mode, physical and chemical properties of oil, gas and condensate;

technological mode of serviced wells, device and principle of operation of gas treatment facilities, group metering units;

systems for collecting and transporting oil, gas, condensate, gas injection and withdrawal, serviced instrumentation;

equipment, means of automation and remote control, technical characteristics;

device and operating rules of ground field equipment;

installations, pipelines and instruments, basic information on methods of intensifying oil and gas production, well research, development of oil and gas fields, underground (current) and well workover;

basic techniques and technologies for drilling and development of oil and gas wells;

rules for operating electrical equipment and work on electrical installations.

Section 20. Oil and Gas Production Operator, 6 Category

135. Characteristics of the work:

process management for all methods of oil, gas, gas condensate production;

gas injection and extraction and the implementation of geological and technical measures to maintain and improve the well regime;

development and commissioning of wells and electric submersible centrifugal pumps with a capacity of up to 500 cubic meters per day;

adjustment of ignition devices of flare systems, maintenance of gas processing facilities, gas cleaning and drying, injection wells with an operating pressure of up to 15 megapascals (up to 150 kilograms-force per square centimeter);

management of the installation and dismantling of simple and medium complexity oilfield equipment, installations, mechanisms, instrumentation and communications;

participation in the preparation of wells for capital and underground (current) repair and to receive them after repair;

preparation of wells for research, development, their commissioning;

determination of the nature of problems in the ground and underground equipment, in the work of automation and remote control equipment with the help of instrumentation;

replacement of faulty local automatics units, minor repairs;

determination of the causes of the malfunction and elimination of simple damages in the power and lighting network, control gears and electric motors;

leadership and participation in the maintenance of communications gas lift wells (gas manifolds, gas separators, heat exchangers);

management of lower-level oil and gas production operators.

136. Is obliged to know:

technological process of oil, gas and gas condensate production, gas injection and extraction;

technical characteristics and device of underground and surface equipment;

types of underground and capital repairs of wells;

methods of well testing and intensification of oil and gas production;

device and operating rules of pressure vessels, wiring and schematic diagrams;

rules of operation of the serviced equipment, automation and remote control, fundamentals of radio engineering, electrical engineering, automation and remote control.

137. Technical and vocational (secondary special, secondary vocational) education is required.

Section 21. Oil and Gas Production Operator, 7 Category

138. Characteristics of the work:

process management of oil, gas, gas condensate production in various ways and monitoring the uninterrupted operation of wells, gas treatment plants, group metering units, booster pump and compressor stations and geological and technical measures to maintain and improve the well operation mode;

ensuring a given rate of operation of oil and gas wells;

output to the operation mode of electric submersible centrifugal pumps with a capacity of over 500 cubic meters per day, metering pumps for supplying methanol to the reduction units, gas-lift and equipped with sucker-rod deep pumps for wells with multiple start-up and shutdown using the control station and monitoring the parameters of the pumped liquid until the production is received wells in accordance with its regime;

maintenance of injection wells using the method of maintaining reservoir pressure with the injection of high pressure gas over 15 megapascals (over 150 kilograms-force per square centimeter), making calculations and managing work on the chemical treatment of wells;

leadership and participation in the installation and dismantling of complex process equipment, electric submersible centrifugal plants, pressure vessels, automated group metering systems;

participation in the preparation of facilities for underground (current) and overhaul;

Reception of objects from repair, participation in their adjustment and start-up after repair;

participation in the installation of start-up electrical equipment, control stations, automation and remote control units, performance of control, measuring and adjustment work in automation and remote control systems;

control over the work of brigade oil metering stations;

Purging, prevention of process oil pipelines, on-site gas pipelines, gas manifolds;

participation in the work on testing the well lift for tightness, on purging the well chambers with gas;

participation in the scheduled maintenance of gas manifolds (changing diaphragms, seats, ball valves, etc.);

maintenance of on-site maintenance records;

management of lower-level oil and gas production operators.

139. Is obliged to know:

characteristics of the field being developed, technical characteristics and construction of underground and surface equipment;

types of well maintenance and workover;

methods of development and research wells, the intensification of oil and gas production;

device and rules for the use of automation systems, remote control and software devices used in complex automation of fields;

bases of automation and telemechanics.

140. Technical and vocational (secondary special, secondary vocational) education is required.

Section 22. Dewatering and Desalting Plant Operator

141. Characteristics of the work:

technological process of dehydration, desalting and stabilization of oil with the selection of a wide fraction of light hydrocarbons according to the technological regulations of the installations;

regulation and control of technological parameters;

temperature, pressure, flow, interfacial levels in technological devices;

preparation of demulsifier and alkali solutions, fresh water dosage;

alkalization of unstable gasoline;

delivery of unstable gasoline to the consumer;

accounting of the amount of prepared oil, unstable gasoline and consumption of chemical reagents;

servicing pumps and process equipment, checking the operation of safety devices, servicing oil heaters;

preparation of technological devices for repair, participation in the repair and acceptance of devices from repair.

142. Is obliged to know:

physical and chemical properties of oil, gases, chemicals, gasoline;

purpose, technical characteristics and operating rules of the dewatering and desalting plant , equipment;

equipment and used instrumentation;

the effect of water and salts on the further processing of oil;

methods of laboratory control, the main methods of destruction of the emulsion;

rules of operation of pressure vessels;

rules for the elimination of possible accidents at the facility, plumbing in the amount of work performed.

When working on dewatering and desalting plants under the guidance of an operator of a higher qualification dewatering and desalting plant - 3 category;

when working on dewatering and desalting plants or on electric desalting and stabilization plants under the guidance of an operator of a higher qualification dewatering and desalting plant – 4 category;

when working on electrical desalting and stabilization plants - 5 category.

Section 23. Platform and Sea Drilling Base Installation and Repair Locksmith , 2 Category

143. Characteristics of the work:

the performance of the simplest demolition, installation and carpentry work related to the repair of individual nodes of offshore oilfield facilities under the supervision of a fitter for the installation and repair of bases of marine drilling and higher qualification racks;

preparation of the workplace for the production of repair work;

routine repairs of narrow gauge railways on offshore ramps, sidewalks, wheel baffles and fences;

partial disassembly and installation of working and protective flooring of the overpass and offshore bases;

participation in the assembly, disassembly, tooling and preparation for the work of the pile-driving unit;

assisting the “Electric and Gas Welder” in carrying out repair work on offshore drilling structures.

144. Is obliged to know:

technological sequence of operations in the repair of offshore oilfield facilities;

the simplest carpentry and metalwork, used carpentry and metalwork tools;

the basic methods of piling works;

slinging rules and movement of structures and goods.

Section 24. Platform and Sea Drilling Base Installation and Repair Locksmith , 3 Category

145. Characteristics of the work:

execution of installation, dismantling, pile driving, drilling and carpentry works of average complexity associated with the repair of offshore oilfield facilities;

repair of wooden structures of the bases of marine drilling and overpasses;

string simple nautical knots;

slinging and dis-slinging metal;

measurement of the depth of the sea and the length of the piles;

participation in the assembly, disassembly, tooling and preparation for the work of the piling and drilling unit;

assembling and launching pontoon-suspended platforms and other devices;

execution of work on the laying of narrow-gauge tracks on the overpass;

repair and installation of anodic cathode and sacrificial protection devices, underwater metal structures of offshore drilling platforms and racks;

performance of gas-cutting works.

146. Is obliged to know:

technological sequence of operations for the installation, dismantling and repair of offshore drilling and racks, drilling holes in the seabed, driving piles and fastening repaired components and wooden structures;

arrangements of mechanisms for drilling and driving piles, tools used during installation, repair and dismantling of the bases of offshore drilling and racks;

the main methods of making pile driving, drilling, plumbing and carpentry, methods of slinging and moving goods and materials used in the repair of offshore bases and racks.

Section 25. Platform and Sea Drilling Base Installation and Repair Locksmith, 4 Category

147. Characteristics of the work:

installation, dismantling, pile driving, drilling and carpentry complex work associated with the repair of offshore oilfield facilities;

centering and installation of sections, landing pads, pedestrian walkways;

marking, preparation at the place of surface and underwater pipe networks and corners of rigidity;

flooring and repair work;

welding unit maintenance;

performance of gas-cutting works.

148. Is obliged to know:

base design, types and sizes of blocks, sections, surface and underwater links and their technical characteristics;

device and technical characteristics of pile-driving and burozalivnogo units, the essence of pile-driving and drills filling processes, the range of pipes;

types and characteristics of steel and hemp cables and ropes, the basic techniques for performing simple plumbing and carpentry work, the weight and volume ratio of water and cement for the preparation of cement mortar;

methods of producing high-end work in drilling and piling works, the principle of operation and the rules of operation of welding units.

Section 26. Platform and Sea Drilling Base Installation and Repair Locksmith, 5 Category

149. Characteristics of the work:

performance and coordination of the work of the brigade in the repair of the foundations of marine drilling and ramps;

participation in the harvesting and driving of piles, in drilling the hole on the seabed, in lowering and lifting the drilling tool, filling pipes, pipe fittings, in filling the hole with cement mortar;

markup for cutting patterns;

participation in the cementing of sections, farms, landing sites, pedestrian walkways, in the installation and fastening of surface and underwater communications, blocks and sections, farms and girders of the bases of marine drilling and overpasses;

participation in laying, building and fixing the boards and flooring;

making complex patterns;

keeping a logbook.

150. Is obliged to know:

the design and technical characteristics of the building machinery and equipment used in the repair works;

rules of their operation, possible malfunctions in work and ways of their elimination;

layouts of pipe connections for fastening bases, foundation bars.

Section 27. Sea Floating Drilling Unit Assistant Driller 3 Category

151. Characteristics of the work:

participation in the installation of the drilling floating unit at the point of drilling in the sea , preparing the unit for operation, in lowering and lifting the drilling tool;

inspection and preparation of the tool, winch and pump;

greasing and fastening of separate knots.

152. Is obliged to know:

technological process and sequence of operations for drilling vertical holes in the sea;

on descent and lifting tools and fittings;

on pouring holes and piles of cement mortar;

device tool used, the methods of tying simple sea knots.

Section 28. Sea Floating Drilling Unit Assistant Driller, 4 Category

153. Characteristics of the work:

conducting the process of drilling in the sea under the direction of the driller of the floating drilling unit in the sea of higher qualification;

installation of supports of all types, canvases, sections and their fastening;

monitoring and controlling the operation of the pump unit;

preparation of cement mortar;

fill holes and piles;

monitoring the health of the instrument used.

154. Is obliged to know:

technological process of drilling at sea, the causes of accidents and methods for their prevention and elimination;

device and principle of operation of drilling equipment and tools;

types and sizes of blocks, sections and canvases of the bases of marine drills;

design and purpose of the pulley system, crownblock, hook and swivel;

the types of steel and hemp cables used, ropes, the purpose and rules for the use of instrumentation installed on the drill floating unit.

Section 29. Sea Floating Drilling Unit Assistant Driller, 5 Category

155. Characteristics of the work:

drilling pits for piles of offshore drilling rigs;

lowering, lifting drilling tools, filling pipes and fittings;

fill holes and piles of cement mortar;

checking drill tools and determining bit wear;

determination of the properties of passable rocks by the work of the bit;

selection of a rational mode of drilling, depending on the soil characteristics of the sea bottom;

production of fishing works;

preparation of cement mortar;

minor repair of the equipment of the drilling unit and the drilling tool;

management of the drilling watch and accounting of work performed.

156. Is obliged to know:

technological process and rules of rotary drilling of vertical holes in the sea;

the design, technical characteristics of a mobile floating drilling unit, large-block foundations for an offshore drilling rig;

the method of selecting a rational mode of drilling, depending on the geological characteristics and nature of rocks of the pound;

rules for finding the point of drilling according to specified benchmarks and parameters, the range of pipes used for the manufacture of valves;

the types of steel cables used, hemp ropes and the rules of their operation, methods of safe attachment of the equipment used, tools, structures.

Section 30. Sea Floating Drilling Unit Dieselist,, 4 Category

157. Characteristics of the work:

maintenance and operation of the engine of the mobile floating drilling unit at sea;

determination of engine malfunctions and their elimination;

battery charging;

participation in the performance of work related to the repair of bases of offshore drilling rigs and racks;

keeping a log of the engine and accounting for fuel and lubricant consumption;

technical inspection and repair of the engine.

158. Is obliged to know:

technological process and rules of rotary drilling of vertical holes in the sea;

the design and principle of operation of internal combustion engines mounted on a mobile floating drilling unit;

engine power system, rules for lubrication, start, stop and cool them;

drive device and mechanism for switching on and switching of the equipment used;

the device of batteries and the rules of their charging, the properties and composition of fuels and lubricants used for internal combustion engines, tools and instruments necessary for the maintenance and repair of the engine, and the rules for their use;

plumbing in the amount of work performed.

Section 31. Well Flow Rate Measurer, 2 Category

159. Characteristics of the work:

measurement of oil and water in mernik, separators, ladders;

fluid sampling from flow lines of wells and tanks;

pumping oil from the measuring device (capacity) after measuring the flow rate.

160. Is obliged to know:

methods of oil production and operation of oil wells;

oilfield and field gathering scheme;

the purpose, technical characteristics, device of individual and group metering installations, ladders, debitometers and instrumentation, basic information about the physical properties of liquids.

Section 32. Well Flow Rate Measurer, 3 Category

161. Characteristics of the work:

measurement of the produced gas, determination of the gas factor;

the implementation of control measurements of the flow rate of the automatic group metering installation;

monitoring the work of group metering units during the production of measurements, their transfer from remote control to manual;

switching wells to receive the comb group installations;

sampling on group metering units;

logging measurements.

162. Is obliged to know:

methods of operating oil and gas wells;

device and technical characteristics of group metering units;

oilfield and field gathering scheme;

methods for determining the content of water and oil, the specific weight of oil, the device and principle of operation of debitometers, the applied means of automation and instrumentation.

Section 33. Well Production Maintenance Operator.

163. Characteristics of the work:

Underground well repair;

change of single-row and double-row elevators, paraffin pipes, deep-well pumps, separate operation equipment, gas-lift valves;

change of immersion of submersible pumps, elimination of cliffs, lapel rods, lovilnye work on the extraction of tools and wire;

flushing of the bottom valve of the submersible pump and plunger;

disassembly and cleaning of gas and sand anchors;

flushing, cleaning wells from sand plugs, mud, flushing wells with hot oil and other chemical reagents;

the elimination of hydrate plugs in the wellbore, cleaning of the production string and tubing from paraffin, salt deposits and resins;

well patterning with backhole drilling;

transfer of wells from one mode of operation to another;

preparation of wells for shooting and geophysical surveys;

installation and removal of intake valves and cut-offs;

closing and opening of mechanical circulation valves, pressure testing of underground equipment of wells;

assembly and disassembly of wellhead equipment for various methods of operation;

the implementation of preventive maintenance of equipment and tools, weight indicator;

participation in the loading and unloading operations associated with the underground repair of wells;

performance of work to restore and increase the injectivity of injection wells;

installation and fastening of mobile units, structures and rope technology;

in the fields where there are no preparatory teams, all work related to the installation of lifting equipment and auxiliary and auxiliary works (preparation of wells for repair, killing wells);

connection and disconnection of electrical equipment and lighting equipment in wells equipped with plug-in connectors;

management of cable technology.

164. Is obliged to know:

well operation methods, gas, oil and injection well designs;

production technology of underground repair, development and killing wells with all methods of operation;

purpose, device and operating rules of lifting facilities (towers, masts), pulley system and its elements;

submersible pumps, gas-lift valves, cable technology used in the underground repair of wells;

device and principle of operation of machines for mechanical screwing and unscrewing tubing and rods, cable wound, weight indicator;

the purpose and design of the means of mechanization and automation of launching operations, basic information about hydraulic and pneumatic systems and their device;

methods of operation and calculation of the equipment of the pulley system depending on the lifted load, permissible loads and speed when performing cable works;

devices and installation rules for blowout equipment (small preventers);

device, maintenance of hydraulic depth winch and tubing installation;

methods of managing them, types of gas-sanding anchors and their use, types of tools used in the underground repair of wells, and rules for using them;

allowable speeds for lifting pipes and rods with various tooling and various well equipment;

calculation of the sand plug washing process, current guidance cards of rational organization of labor;

rules for connecting the pumping unit, lighting equipment.

In case of underground repair of wells of the I category of complexity under the guidance of an operator for underground repair of wells of higher qualification – 4 category;

at underground repair of wells of the I category or wells of the II category of complexity under the guidance of the operator for the underground repair of wells of higher qualification - 5 category;

at underground repair of wells of the II category of complexity - the 6 category;

at underground repair of wells with a depth of more than 3000 meters, horizontal wells with a depth of up to 2000 meters, or operated by gas lift method – 7 category.

For operators in underground repair of wells 6 and 7 bits require technical and vocational (secondary special, secondary vocational) education.

Section 34. Oil and Gas Well Diagnostics Operator, 3 Category

165. Characteristics of the work:

using the depth winches to measure the depth of the well, the level of the liquid and the watershed, the patterning of the wells with the beating of the bottom;

calculation of bottomhole depth, fluid level, well flow rate measurement by the flowmeter ;

participation in the measurement of oil and gas flow rates, the dynamometer of wells, the study of wells with depth gauges, routine inspection of research instruments and depth winches;

carrying out preparatory and final operations.

166. Is obliged to know:

characteristics of the developed field;

methods of well operation and methods of their research;

purpose, device and rules of operation of wellhead equipment of wells, winches, dynamographs, remote recording devices;

rules for connecting measuring instruments to the power and lighting network.

Section 35. Oil and Gas Well Diagnostics Operator, 4 Category

167. Characteristics of the work:

patterning of wells with beating of the bottomhole, measurement of bottomhole and reservoir pressure in production and injection wells;

measurement of fluid levels in the well using an echo sounder and a wavemeter, tracking the recovery (fall) of the fluid level;

measurement of the flow rate of oil, gas and determination of the gas factor;

participation in research by remote devices (flow meter, flow meter, thermometer, moisture meter, pressure gauge, gas analyzer);

determination of research results;

driving a car or tractor;

manufacture of current repair of equipment and equipment.

168. Is obliged to know:

technological process of oil and gas production;

well testing methods;

technical characteristics and purpose of the surface equipment of wells and applied instrumentation;

rules of operation of depth instruments, instruments for measuring the flow rate of oil, gas and determining the gas factor;

rules for connecting measuring instruments to the power and lighting network.

Section 36. Oil and Gas Well Diagnostics Operator, 5 Category

169. Characteristics of the work:

the implementation of various types of well studies with deep, remote and recording devices;

removal of indicator curves and pressure recovery curves;

patterning tubing, hammering the bottomhole and fluid level in wells, including those with a curved barrel;

measurement of the gas factor, research of high-pressure and compressor wells with high pressure through special lubricators and floor drain separators with sampling of liquids, gas and gas condensate mixtures;

production of research works on hydraulic interception of layers;

deep sampling of oil and water by the sampler;

preparation of preliminary conclusions on research materials;

well research materials processing;

driving a car or tractor;

production of preventive and current repairs of research equipment, instruments and depth winch.

170. Is obliged to know:

characteristics of the developed field;

physical and chemical properties of oil, water and gas;

methods of maintaining reservoir pressure;

purpose and technical characteristics of surface and underground equipment of wells and research equipment;

methods of processing research materials, techniques for constructing curves and graphs;

method of determining the coefficient of productivity of wells.

171. Technical and vocational (secondary special, secondary vocational) education is required.

Section 37. Oil and Gas Well Diagnostics Operator, 6 Category

172. Characteristics of the work:

leadership and participation in the installation and dismantling of complex research equipment that requires high qualification;

working with pressure vessels;

reception of objects from repair, participation in their adjustment and start-up after repair;

conducting research on equipment equipped with microprocessor units, and processing of research results using personal electronic computers;

conducting special studies to determine the maximum allowable depressions on the reservoir;

selection of the optimal technological mode of operation of wells operating with various complications;

construction of operational maps for monitoring the development of oil, gas and gas condensate fields.

173. Is obliged to know:

characteristics of the developed field;

the main methods of intensification of the bottomhole formation zone;

the main provisions of the field development project;

purpose, device and rules of operation of pressure vessels;

basics of computer science and computing.

174. Technical and vocational (secondary special, secondary vocational) education is required.

Section 38. Operator for the Preparation of Wells for Capital and Underground Repairs, 3 Category

175. Characteristics of the work:

preparation of wells for repairs;

work on the mantling of the equipment and dis-mantling of pulley system, suspension and removal of the pulley block, hook;

change of pushing rollers, crown block rollers, delays;

flushing and cleaning pipes from dirt and paraffin, preparatory work for the bottomhole treatment zone;

repair of floors, walkways and flight stairs;

sorting pipes and rods, screwing and unscrewing couplings, rings and nipples;

laying pipes and rods;

participation in the procurement of the necessary reagents, solutions, liquids;

performing rigging, carpentry, plumbing and earthworks for the preparation of wells for repairs;

participation in the movement, installation of mobile lifting structures (towers, masts) and units, testing and alignment at the well, killing wells before the production of capital and underground repairs of wells.

176. Is obliged to know:

the purpose and types of equipment, units, materials, tools and reagents used in workovers and underground repairs of wells;

types of equipment of the pulley system, lifting structures (towers, masts) and the rules of their attachment;

main types of metalwork, carpentry and rigging work;

the main devices used during loading and unloading operations, types of capital and underground repairs of wells.

When working under the guidance of an operator for the preparation of wells for capital and underground repairs of higher qualifications - 2 category.

Section 39. Operator for the Preparation of Wells for Capital and Underground Repairs, 4 Category

177. Characteristics of the work:

installation, testing and alignment of mobile structures (towers, masts) and units;

checking and installing equipment for hanging rods and installing pipes for a finger, devices for retracting to the side of the balancer head and troubleshooting;

preparation of various solutions for killing wells;

participation in the processes of killing and discharge of wells before overhaul and underground repairs, final works after the production of repairs.

178. Is obliged to know:

overhaul and well repair technology;

purpose, types and technical characteristics of equipment, units used in the overhaul and underground repairs;

rules for the installation and centering of lifting equipment at the wellhead;

rules of carrying out works.

Section 40. Operator for the Preparation of Wells for Overhaul and Underground Repairs, 5 Category

179. Characteristics of the work:

movement of mobile lifting structures (towers, masts) and units and control over the installation and alignment of them in the well;

killing, discharge of wells before the production of underground and major repairs and flushing after repair;

determination of the location and installation of power and wind delays;

placement and installation of equipment, mobile lifting structures and units for a given technological process of well repair;

management of operators of lower qualifications.

180. Is obliged to know:

rules for moving lifting equipment;

ways to eliminate displacements in the joints and parts of the tower;

methods and methods of killing wells with various solutions;

diagram of the route of movement of lifting structures (towers, masts);

methods of preparing solutions and methods for their use.

Section 41. Well Workover Operations Driller

181. Characteristics of the work:

technological process of well workover by aggregates and hoists mounted on a tractor or a truck chassis;

checking the technical condition of the lifting unit, equipment, devices, tools and preparing them for work;

lifting and centering the mast, testing anchors;

work on the mantling of the equipment and dis-mantling of pulley system and re-equipment of it in the process of repairing a well;

assembly and disassembly of wellhead equipment for various methods of operation;

lowering and lifting casing, drill and tubing pipes and rods;

assembly and disassembly of drilling and fishing tools;

survey of wells with end and cone seals or templates;

installation and reclamation of gas, gas condensate and oil well filters, use of repair technology using coil tubing installations, liquidation of wells opened and operating aggressive and acid gases (hydrogen sulfide, carbon dioxide and others), restoration of the “ old wells” by two trunks;

installation and drilling of cement bridges;

drilling holes for the installation of an electric centrifugal pump and along the conductors, lapel and torsion of the production columns in the desired interval;

execution of preparatory and final, complex insulation and fishing works in oil, gas and injection wells;

washing and drilling sand plugs, salt deposits;

monitoring the level of fluid in the well in the process of tripping;

implementation of measures to prevent accidents and complications in the well;

conducting technological processes for: drilling a new wellbore in a well string, directional drilling and expansion of a new wellbore, lowering production strings, acid and heat treatment of a well bottom, dredging wells, cutting out areas of a string operation, waterproofing works, installing and lifting packers and resistant anchors, milling the objects left in the well and extracting them, preparing and maintaining the necessary parameters of various multicomponent solutions and killing fluids blocking compositions for injection into the bottomhole formation, preparation and carrying out cement works in the well, preparing the well for pressure testing of columns, discharge and injection lines, testing of oil, gas and injection wells, installation and disassembly of compact blowout equipment (preventer), swivels, working pipes, flushing pumps;

production of equipment and tool maintenance directly at the well, shutting off and connecting lighting equipment, mechanisms, screwing and unscrewing pipes with plug connectors;

conducting the process of hydraulic fracturing and hydro-sand blasting perforation, eliminating the leakage of the production casing by various methods, eliminating inter-column flows, revising and replacing the wellhead packers, and equipping the wells with gravel bottom-hole filters;

checking the tightness of the production string by crimping, lowering the level and using a hydraulic parker;

deblocking the bottomhole formation by the method of treatment with alkalis, acids;

development of wells, including the use of nitrogen-booster complexes;

in the absence of trained teams, the performance of all work related to the installation of lifting equipment and the preparation of wells for repair (auxiliary and auxiliary work, killing) ;

sealing the wellhead when direct oil and gas shows are detected, the promptness and correctness of the actions of watch crew members in the “Release” alarm and the elimination of gas and oil shows;

maintaining on-line readiness of blowout equipment and devices;

work on the determination of the injectivity of the reservoir by the test injection;

preparation of the wellbore and installation of the equipment of the mouth for the production of geophysical work;

installation of cartograms and observation of the readings of the recording electronic flow meter and pressure gauge;

maintenance and repair of wellhead piping fittings;

participation in carrying out research work in the development of wells by various methods of operation, in carrying out cable methods of repairing wells.

182. Is obliged to know:

well design, the nature and features of the repair work and the technological procedure for their implementation;

production technology of workover of wells, the basics of the technology of drilling and development of wells, oil and gas;

methods of intensifying oil production, the rules for conducting insulation and fishing works, standard projects for the organization of workplaces and maps of advanced and safe labor methods, design, structure, principle of operation, technical characteristics and operating rules for lifting structures and mechanisms;

types of main and auxiliary drilling equipment, used instrumentation, elements of small-scale mechanization, blowout preventer equipment (preventers);

methods and methods to combat oil and gas emissions and complications in wells, methods of preparing multicomponent blocking and deblocking solutions for well development, technology to eliminate leakage of the production string and annular flows, as well as the principle of operation of the equipment used, the design of production packers, their types and methods of extraction, methods of using equipment in the elimination of water inflows and removal of mechanical impurities:

methods of preparing clay solutions, plugging mixtures and chemical reagents, cleaning and drilling sand and salt plugs in the well;

methods for determining the density and yield of drilling fluids, selection of parameters of the selection fluid during well plugging, types of design of sucker-rod and electric centrifugal pumps, main dimensions, allowable wear and strength factor used in the overhaul of wells, pipes, equipment, technology for killing a new wellbore, directional drilling and sighted descent of drilling tools and diverters;

method of determining the fit of the tool and the diverters on the face, the rules for the production of acid and heat treatment of the bottom of wells, the standards of the threaded connections used;

methods for determining the status of the column and other items in the well, the equipment piping and wellhead layout for various technological hydraulic fracturing and jetting perforation schemes, the composition and methods for preparing injected fluids and sandbags, calculating the required amount of liquids and sand, technical characteristics of the equipment and instrumentation used in hydraulic fracturing, well development methods, drilling equipment piping schemes.

183. Technical and vocational (secondary special, secondary vocational) education is required.

During the work on wells of I category of complexity and up to 1,500 meters in depth inclusive - the 5 category;

when working on wells of the II category of complexity and a depth of more than 1,500 meters to 4,000 meters inclusive - 6 category;

when working on wells with a depth of 4,000 meters to 6,000 meters, inclusively, as well as directional wells with a depth of more than 1,500 meters and horizontal wells - 7 category;

when working on wells over 6,000 meters - 8 category.

Section 42. Well Workover Assistant Driller

184. Characteristics of the work:

participation in the installation and dismantling of lifting equipment when working on receiving walkways for laying tubing and drill pipes;

participation in preparatory and final works during well workover;

monitoring the circulation system and cleaning it from sludge;

participation in the testing and lubrication of equipment and tools;

participation in the rigging and re-equipment of the pulley system;

length measurement and counting the number of pipes and sucker rods;

participation in loading and unloading of pipes and sucker rods;

laying and supply of pipes and sucker rods from walkways and walkways during tripping;

sorting pipes and sucker rods on walkways;

unscrewing and screwing the safety cap from the lower threaded end of the pipes and sucker rods;

the imposition of a protective lubricant on the threaded part of pipes and pump rods;

participation in installation and dismantling, piping and crimping of high and low pressure lines during work on the working platform for supplying tubing and drill pipes;

production of equipment and tool repair directly on wells;

connection and disconnection of electrical equipment and lighting equipment at the well in the presence of plug connectors;

participation in conducting the process of well workover;

execution of horseback works on the installation of tubing and drill pipes;

monitoring the operation parameters of flushing pumps, machine suspension and installation of automatic keys;

installation of pipes for a finger or laying them on the walkway during the descent and ascent of drill and tubing pipes;

participation in the measurement of pipes;

monitoring tackle system health;

preparation of keys, elevators, machines for screwing and unscrewing pipes and rods for tripping operations;

monitoring the serviceability of the flight of stairs and floors;

participation in the preparation of plugging mixtures and chemical reagents, in carrying out acid and hydrothermal treatments of wells, in carrying out fishing, research and shot work , in well development, in carrying out cable methods of well repair, in assembling, disassembling and testing turbodrills and downhole motors;

participation in the assembly, disassembly and installation of metal patches,

operational and pressing packers, various types of fishing and cutting tools, downhole equipment, filters, wellhead, fountain armature, blowout preventer and fire extinguishing equipment, in replacing wellhead packers, installation and dismantling, strapping and crimping of high and low pressure lines;

control over the serviceable condition of the rotor with a drive, the parameters of filling fluids, plugging mixtures and chemical reagents.

185. Is obliged to know:

well workover technology;

purpose and rules of operation of equipment, mechanisms and instrumentation used in the overhaul of wells;

equipment strapping schemes;

principle of operation of the used instrumentation;

device lifting structures and mechanisms;

the sequence of operations during the descent and ascent of pipes and rods and when building the tool;

applied tools and rules for their use;

the device of mid-flight ladders, under-chronoblock platforms and fingers for installation of candles;

typical projects for the organization of workplaces and maps of advanced and safe working methods;

start-up procedure for flushing pumps, their design and repair technology;

information about applied plugging mixtures, killing liquids, multicomponent solutions, blocking water insulating compositions, chemical reagents, clay solutions and methods for their preparation;

rules of working with acids and alkalis, methods of well development, methods of well testing devices ("Nadym", "Dikt" and others);

types and sizes of elevators, lifting hooks, traveling blocks, crown blocks, swivels and ropes;

control rules for blowout equipment.

186. When working on receiving walkways for laying tubing and drill pipes:

well repair I category of complexity - 3 category;

in the repair of wells II category of complexity - 4 category;

when repairing wells over 4,000 meters deep - 5 category.

187. When working on the working platform for supplying tubing and drill pipes:

repair of wells of I category of complexity - 4 category;

at repair of wells of the II category of complexity - the 5 category;

when repairing wells with a depth of more than 4,000 meters – 6 category.

For an assistant driller of workover of wells of the 6category, technical and vocational (specialized secondary, secondary vocational) education is required.

Section 43. Well Dewaxing Portable Rig Operator

188. Characteristics of the work:

preparing a mobile unit for dewaxing wells to work on the site;

technological process for the dewaxing of oil wells, ladders, measuring tanks, manifolds and other technological equipment with hot oil;

carrying out slamming, flushing and other works without heating and with the supply of process fluid to the output of the mobile unit for dewaxing wells, not passing through the heater;

heating and forcing water for hot water for technical purposes;

piping of a mobile unit for dewaxing wells with tank trucks, field process plants, wellhead ;

installation of a mobile unit for dewaxing wells at the wellhead in accordance with the layout of equipment during dewaxing wells;

laying lines for dewaxing hot oil, flushing works, for heating and discharge of hot water for technical purposes;

monitoring the operating parameters of the oil heater, engine, instrumentation and all auxiliary mechanisms of the serviced mobile unit for dewaxing wells, installation and dismantling of equipment, instrumentation and instrumentation installation, performing preventive and maintenance of equipment of the unit and the car, keeping a log operation of a mobile unit for dewaxing wells;

driving a car.

189. Is obliged to know:

technological process of oil and gas production;

physical and chemical properties of oil, water, gas and paraffin;

methods of operating oil wells;

wellhead piping;

the device and the rules of operation of the serviced mobile unit for dewaxing wells, main and auxiliary equipment, equipment, used instrumentation, car;

technological regime and process of dewaxing oil wells with hot oil, discharge lines and oil-gathering plants;

plumbing in the amount of work performed.

When servicing a mobile unit for dewaxing of wells mounted on the vehicle chassis, with a working pressure of hot oil up to 10 megapascals (up to 100 kilograms-force per square centimeter) inclusive - 5 category;

when servicing a mobile unit for dewaxing wells with a working pressure of hot oil over 10 megapascals (over 100 kg-force per square centimeter) - 6 category.

190. Technical and vocational (secondary special, secondary vocational) education is required.

Section 44. Down-the-Hole Treatment Operator, 3 Category

191. Characteristics of the work:

preparation of chemicals and equipment;

assembly and disassembly of rigid lines of high and low pressure, flexible hoses when installing units at the well;

measuring the amount of pumped solution;

determination of the concentration of hydrochloric acid and the dosage of chemicals;

participation in the heat treatment of wells;

production of minor repairs of the equipment used.

192. Is obliged to know:

basic information on the technology of oil and gas;

oil and gas fields and methods of intensifying oil production;

purpose of chemical and heat treatment of wells;

device and principle of operation of the equipment used;

methods for the preparation of chemical reagents and rules for their storage, rules for the loading and unloading of chemical reagents.

When working under the guidance of the operator for the chemical treatment of wells of higher qualification - 2 Category.

Section 45. Down-the-Hole Treatment Operator, 4 Category

193. Characteristics of the work:

chemical treatment of wells;

installation of cartograms and observation of the readings of the recording instrumentation ;

management of chemical dosing;

installation, dismantling of the injection line, chemical injection at pressures up to 100 atmospheres;

deblocking of the bottomhole formation and well development;

monitoring the heat treatment process;

registration parameters.

194. Is obliged to know:

technology of chemical and heat treatment of wells;

technical characteristics, purpose and principles of operation of the serviced equipment, instruments for determining the concentration of acid, chemical and thermal treatment of wells and applied instrumentation.

Section 46. Down-the-Hole Treatment Operator, 5 Category

195. Characteristics of the work:

process management and coordination of work on the chemical treatment of wells;
calculation of parameters of the injected fluid;
pressure testing of lines for tightness, determination of injectivity of wells;
chemical injection at pressures above 100 atmospheres;
regulation of fluid supply to the pump intakes of the unit;
installation of devices at the wellhead, connecting them with wellhead fittings;
dynamometer wells;
participation in the repair of automation and remote control equipment, adjustment of primary elements;
keeping track of documentation;
leadership team;
reception and delivery of the watch.
196. Is obliged know:
oil and gas production technology;
chemical well treatment technology;
technical characteristics, designs and operating rules of the serviced equipment, instruments for determining the concentration of chemicals, chemical treatment of wells and instrumentation;
formulation and solution preparation technology;
methods of preparing, transporting and storing chemical reagents, circuits of serviced equipment, automation, dispatching, rules for working at low-voltage and electrical installations.

Chapter 4. Typical indicators for classifying well repairs by categories

Section I. Underground Well Repair

Section 1. Complexity Category I

197. Change of the submersible pump with the rise of pipes without liquid with a depth of suspension up to 1,300 meters;
changing the submersible pump without lifting the pipes or repairing the pump plunger, changing the immersion of the submersible pump with raising the pipes with liquid with a depth of suspension up to 700 meters;
the elimination of separation or unscrewing of the rods at a depth of up to 1,400 meters;
removing the plunger and catching the suction valve with checking the condition and repairing them with a pump suspension depth of up to 1,400 meters;
flushing (ramming) of the submersible pump, eliminating the breakage of the polished rod , setting off water and mud from the bottom, changing the lifting pipes of single-row and two-row elevators;

change of waxed pipes, change of the depth of immersion of pipes with a single-row elevator for any methods of operation with a depth of suspension of lifting pipes up to 1,600 meters;

change of compressor pipes of a double-row elevator, or change of the depth of their suspension with the depth of suspension of external pipes up to 1,000 meters;

flushing (cleaning) wells from the sand plug, mud, flushing wells with hot oil at a bottomhole depth of up to 1,200 meters;

the elimination of hydrate plugs in the boreholes in which the static pressure is less than the pressure of the liquid column from the wellhead to the hydrate plug;

flushing the well with precipitation water with a gradual descent of pipes to a depth of 1,300 meters;

transfer of wells from one mode of operation to another with a depth of suspension up to 1,200 meters;

pump change from suspension to 1,300 meters.

Section 2. Complexity Category II

198. Change of the submersible pump with the rise of pipes without liquid with a depth of suspension of more than 1,300 meters;

change of a submersible pump without lifting pipes or repairing a pump plunger, changing the immersion of a submersible pump with a depth of suspension of more than 1,500 meters;

change of the submersible pump with the lifting of pipes with liquid at a depth of over 700 meters;

elimination of the breakage or unscrewing of the rods at a depth of more than 1,400 meters;

removing the plunger and catching the suction valve with checking the condition and repairing them with a pump suspension depth of more than 1,400 meters;

change of lifting pipes of single-row and double-row elevators;

changing of waxed pipes, changing the depth of immersion of pipes with a single-row elevator for any methods of operation with a depth of suspension of lifting pipes more than 1,600 meters;

changing the compressor pipes of the double-row elevator or changing the depth of their suspension when the depth of the external pipes is more than 1,000 meters;

flushing (cleaning) wells from the sand plug, mud at a bottomhole depth of more than 1,200 meters;

cleaning of the production string from paraffin, lowering and lifting tubing pipes during operation of wells with electric submersible pumps of various grades, hydraulic piston pumps, replacement elevators, using a hydro-steam method during separate-simultaneous operation of two or more horizons;

installation of a pipeless pump, the elimination of hydrate plugs in wellbores, in which the static pressure exceeds the pressure of the liquid column from the wellhead to the hydrate plug;

flushing the well with precipitation water with a gradual descent of pipes to a depth of over 1,300 meters;

flushing wells with hot oil at a bottomhole depth of more than 1,200 meters;

the elimination of a break or a cuff of tubing or rods with lifting tubing with a liquid, transfer wells from one method of operation to another with a suspension depth of 1,200 meters;

thermogas and chemical treatment of bottomhole irrespective of the depth of the pump suspension, ascent and descent of the depth blocking packers of various brands regardless of the depth of the suspension, opening of productive layers.

Work (on the cable) with the help of cable technology under pressure through a special lubricator (L = 7 meters, m = 500 kilograms) and small preventer:

1) installation and removal of a downhole shut-off valve, plunger gas lift equipment, gas-lift, return and blind plugs;

2) tubing patterning, slaughtering, descent seals to determine the nature of the tool failure;

3) closing and opening of mechanical circulation valves;

4) the installation of the cement bridge scaffold;

5) lovilny works of a scraper wire, cable, foreign objects;

6) the descent of the scraper to clean the tubing from paraffin;

7) cleaning of wells from sand plugs;

8) wells swabbing with a swab;

9) definition of a tubing shoe.

Section 2. Well Workover Operations

Section 1. Complexity Category I

199. When performing work:

return to higher or lower horizons, acid-resin treatment of the bottomhole zone, elimination of annular development, change of the column head (flange), determination of leakage of operational columns and behind-the-casing flow (geophysical studies of wells, impulse neutron generator, determination of the inflow profile, injectivity).

Section 2. Complexity Category II

200. When performing work:

isolation of the production horizon from alien waters (including the elimination of wells), the mandrel of the production string, hydraulic fracturing and hydro-sandblasting perforation,

drilling and drilling of the second wellbore, cutting the pipes of the production string, fishing and milling, repair and insulation works in the wellbore and physical elimination of wells.

201. Notes:

1) all types of work on wells with strong gas manifestations and directional shall refer to the II category of complexity;

2) all work on wells with a depth of more than 1,500 meters shall belong to the II category of complexity;

3) while simultaneously performing several types of work in the same well, the complexity category shall be determined by the highest one.

Chapter 5. Alphabetical Index of the Occupations of Manual Workers

202. An alphabetical index of the occupations of drilling and the extraction of oil and gas is given in the Appendix to the URSG, (issue 6).

Appendix
to the Unified Rating and Skills
Guide for Jobs and Occupations of
Manual Workers (Issue 6)

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