

Locomotive depot. Equipment maintenance technology

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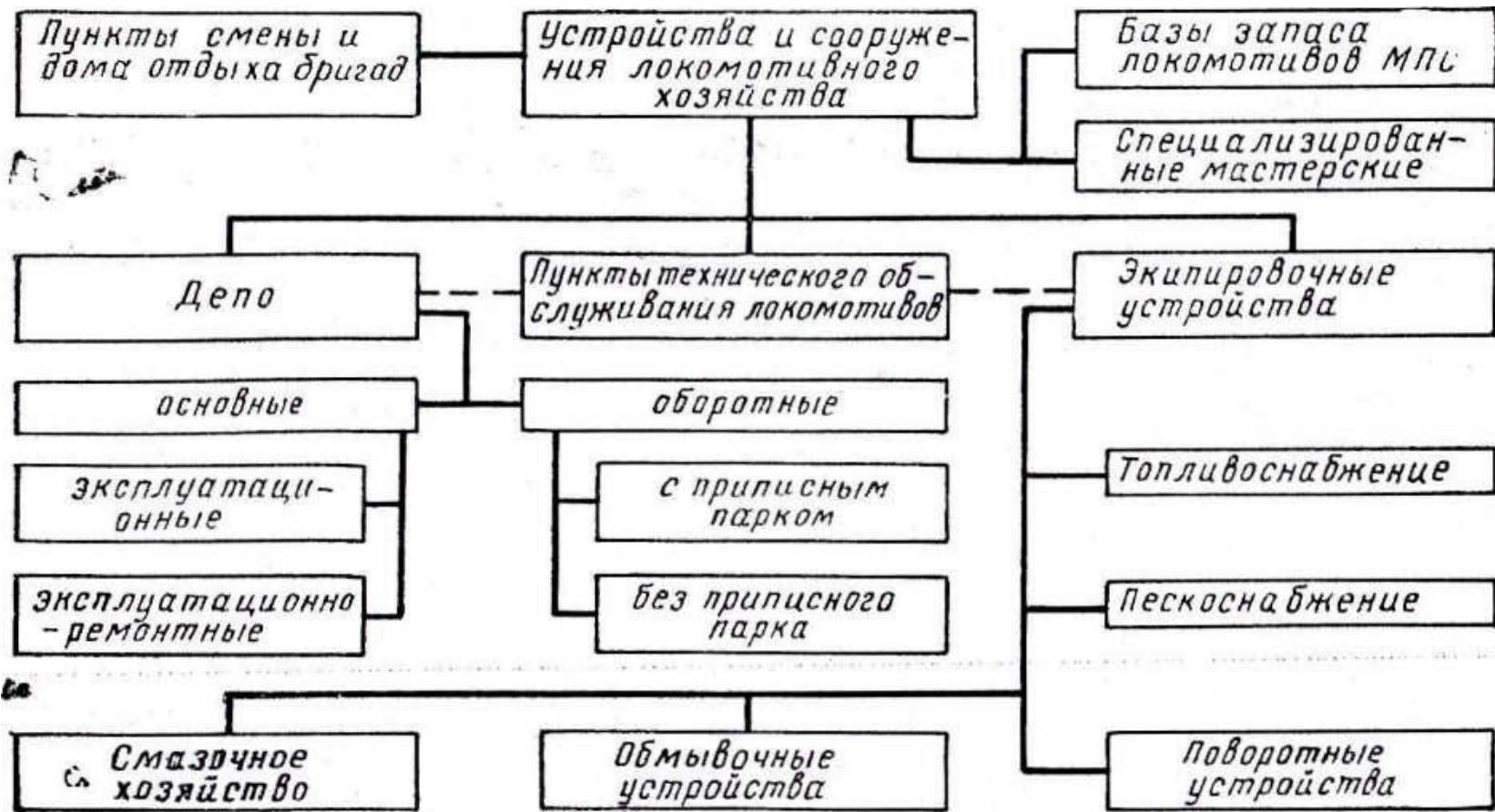
1. Introduction

Before starting the professional activity of future employees of the railway industry, I propose to consider what a locomotive depot is, what workshops it consists of and what technological equipment should contain a modern depot that meets state standards


2.The basics. Concepts.

A locomotive depot is an industrial enterprise whose repair sites and workshops are equipped with modern equipment. The staff of a large depot reaches 3 thousand people and consists of machinists and assistant locomotive drivers (up to 50% of the total staff), qualified locksmiths, machine operators and other specialists.

Facilities and technical facilities include repair shops, testing and equipping devices. They are concentrated at certain points — at railway stations, and in combination with such structures as power substations, warehouses, utility buildings, railway tracks, form locomotive depots - the main and reverse and maintenance points of locomotives — MPOL.



Devices and structures of the locomotive economy



The main locomotive depot is a linear LH enterprise with a mandatory assigned fleet of locomotives. It performs the established types of maintenance and routine repairs, equipment, operates locomotives, completes and trains personnel for locomotive crews and workers of other professions. The main task of the locomotive depot is to provide a given volume of freight and passenger transportation with serviceable, ready-to-work locomotives.

The depot also repairs mechanical, testing and other equipment, provides the current maintenance of industrial and office buildings.

3. Arrangement of locomotive depots

To fulfill the tasks facing the locomotive depot, the following arrangements are provided on its territory:

- fuel warehouse (for storing stocks of diesel fuel, oils and lubricants)
- a turning circle or a turning triangle (for carrying out a periodic or technological turn of a locomotive)
- a locomotive maintenance point (MPOL — for carrying out maintenance operations and equipping locomotives)
- a locomotive repair shop (for performing TO-3 and larger types of repairs)
- a point rheostat tests (for carrying out rheostat tests of diesel locomotives and diesel trains)
- auxiliary workshops (for performing repairs of individual components and aggregates of the locomotive)

Currently, locomotive depots are divided into repair and operation of locomotives. In the first, technological equipment, the stalls themselves, and a contingent of repairmen are concentrated. Secondly, locomotive crews, and administrative personnel (locomotive crew contractors, train drivers, speed gauge tape decoding groups, etc.). The fleet of locomotives is on the balance of operational depots. Fuel depots, as non-core, have been transferred to the supply services.



4. Equipment at the depot

Modern depots are saturated with lifting and transport equipment: overhead cranes, crane beams, electric loaders, electric cars; various washing and cleaning machines that allow washing a complete set of components and parts of a locomotive that has been received for maintenance.

5. Equipment of the electric machine shop

Reliable operation of modern locomotives with electric transmission largely depends on the condition of electric machines and especially traction motors and generators. Therefore, much attention is paid to the maintenance, repair and testing of electric machines. In the electric machine shops of the depot, where current repairs are carried out, special equipment is provided: machines for processing collectors, balancing rotors, anchoring anchors, various presses, drying ovens, impregnation equipment and stands for testing machines, equipment and test benches for repairing and testing electrical equipment of electric locomotives, diesel locomotives, electric trains and diesel trains.

Rheostatic tests of the locomotive tem2



6. Equipment of the diesel locomotive shop

Diesel locomotive depots are also equipped with stands for testing diesel fuel equipment, refrigerator sections, compressors and other equipment. Testing and regulation of diesel generators is carried out on three types of liquid load rheostats: for diesel engines with a capacity of 736, 1470 and 2200 kW. Installations for testing diesel generators of diesel locomotives with the return of electric energy to the grid have been used. In locomotive depots in battery compartments, inspections and repairs of batteries, training charges-discharges and final charge are carried out.

Shop TR-2 electric locomotives SLD-56



7. Conclusion

Thus, thanks to the information received, we can conclude that locomotive depots are an integral part of the railway industry, providing locomotives, both electric locomotives and diesel locomotives, and therefore all railway activities not only in our country, but also around the world

8.Sources

Information:

1. <https://studfile.net/preview/5443866/page:2/>
1. https://dic.academic.ru/dic.nsf/ruwiki/73225#.D0.9E.D0.B1.D1.83.D1.81.D1.82.D1.80.D0.BE.D0.B9.D1.81.D1.82.D0.B2.D0.BE_.D0.BB.D0.BE.D0.BA.D0.BE.D0.BC.D0.BE.D1.82.D0.B8.D0.B2.D0.BD.D1.8B.D1.85.D0.B4.D0.B5.D0.BF.D0.BE
1. <https://studfile.net/preview/3936047/page:40/>

Images:

1. <https://studfile.net/preview/5443866/page:2/>
1. http://www.train-photo.ru/details.php?image_id=142037
1. http://www.train-photo.ru/details.php?image_id=141255&mode=search
1. <http://zaleskiy.com/railroad/locomotive-depot-gorkiy-sortirovochniy-tch-6/>

Thank you
for watching