

AUXILIARY EQUIPMENT FOR WASHING WORK

Draganov N., recipient of higher education "Bachelor" degree

Dmytro Motornyi Tavria State Agrotechnological University, Zaporizhzhia, Ukraine

Brush installations can be drive-through or mobile. In the first case, cars move under their own power or a conveyor relative to brushes rotating on fixed supports (high productivity 30...40 vehicles/hour), and in the second - the entire installation moves relative to a stationary vehicle (up to 20 vehicles/hour) [1].

The line for washing cars is a set of equipment for washing and drying cars. The productivity of such a line is 60...90 cars/hour. Water consumption per wash is 150...225 liters. The total power of the electric drive is 34 kW.

An additional device in the washing line under consideration is an installation for washing car wheel rims, shown in Fig. 1.

Auxiliary equipment. In order not to pollute the drains of the sewer system and to prevent the entry of petroleum products with wastewater into natural bodies of water when it is reused, washing stations are equipped with dirt sumps (Fig. 5.6) and oil and gasoline traps.

For this purpose, settling tanks with a purification unit are used. When reusing water for washing, in addition to purification from suspended particles, the water is subjected to chemical purification, which consists of coagulation, i.e. in the enlargement or coagulation of substances in water into flakes and their precipitation. The sediment of substances is periodically removed [2,3].

For car service stations and small car washes, ground-based monoblock pumping units for primary water treatment are used. Their main advantages are speed and ease of maintenance.

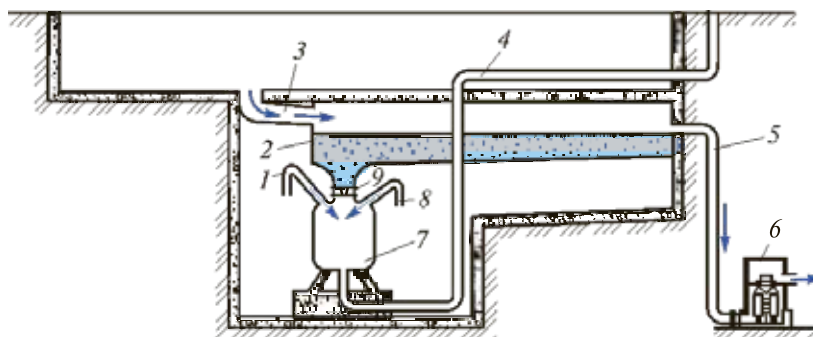


Fig. 1. Dirt sedimentation tank with pneumatic cleaning:

1 - pipe for water supply; 2— sludge tank capacity; 3 - pipe; 4 — pipe for collecting liquefied mud pulp; 5 - drain pipe; 6 - pump; 7 — oil and gasoline trap reservoir; 8 — pipe for supplying compressed air; 9 - valve with electromechanical drive

References.

1. Журавель Д.П. Технічний сервіс в АПК: навчально-методичний посібник до самостійної роботи / Ю.Г. Сорваніді, Д.П. Журавель, А.М. Бондар, О. Ю. Новік. Мелітополь: Видавничо-поліграфічний центр «Люкс», 2021. - 157 с.

2. Журавель Д.П. Технічний сервіс мехатронних систем: навчально-методичний посібник до самостійної роботи / А.М. Бондар, Д.П. Журавель, О. Ю. Новік, К.Г. Петренко, О.В. В'юник. - Мелітополь: Видавничо-поліграфічний центр «Люкс», 2021. - 140 с.

3. Журавель Д.П. Триботехніка: посібник до лабораторно-практичних робіт / Д.П. Журавель, О.Ю. Новік, А.М. Бондар, К.Г. Петренко. — Мелітополь: Видавничо-поліграфічний центр «Люкс», 2019. - 136 с.

Research supervisor: Bondar A., Ph.D., sin. teacher.