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MODERN PROBLEMS OF ROAD CONSTRUCTION MACHINERY

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Abstract: As modern technology develops, so does the demand for cars in the social market. This demand is followed by traffic problems. The primary technique in solving the main problems in the field of road construction are road-building machines. In this article, the author dwells in detail on road construction machinery, their types and the problems associated with them today, which are of great importance in the field of road construction.

Keywords: road construction, machines, projects, equiptment, issues, economy.

Delays in road construction projects due to various reasons are a major problem facing construction professionals. The incapability of finishing projects punctually and within a given budget is a persistent issue worldwide. This study aims to determine the ten principal causes of delay in road construction projects in 25 developing countries across the globe. The study involves two steps. First, the authors compiled information regarding the most frequent delays in a road construction project. Second, they analyzed the intensity of each cause of delay in these projects. The primary function of roads is to provide accessibility and mobility. Presently, developing countries around the world are prioritizing the improvement and linking of their road networks. Road projects are being listed as the primary focus in their national budget, given that a good road network contributes to the development of the economy and national growth.

Therefore, road projects should be completed in accordance with the schedule to serve the immediate needs of stakeholders. Unfortunately, delays in road construction projects due to various reasons are a major problem facing construction professionals. It has been proven that the incapability to finish projects punctually and within a given budget continues to be a persistent issue worldwide. Although the causes of delays are quite comparable across developing countries, several factors unambiguously pertain to local industries, socio-economic backgrounds, cultural matters, and project features, such as land disputes and problems of the right of way for roads. With road construction projects already producing a multitude of issues to the community, such as heavy traffic and increased possibilities of

road accidents, among others, project personnel is also facing the consequences of project failure, profit decrease, and loss of faith to the public in government-funded projects. And sometimes there is a big accident because of car crashes that's why the need of road constructions is increasing and road construction machines as well.

Road construction machines - a group of machines (automobile equipment) intended for construction work , as well as for the operation and maintenance of roads. Despite its widespread use, the term "road construction machines" is not well-established. The term "road construction machines" is also used. For this class of machines, the abbreviations SDM and DSM are used.

Construction of new roads, highways, fly overs, re-carpeting of roads or minor road repairs all come under the common header of road construction. Based of the nature of road construction various machines are used in different combinations to get the work done. Let's take a look at some of the most commonly used road construction equipments.

1. Motor graders: These are the machines used to create a flat surface to place the asphalt on. Motor graders come in various sizes and configurations to suit the scale of the project and its requirements. Most motor graders have multiple axles with the blade located between the front and rear of the machine where the cabin is mounted.
2. Road roller Machines: Road rollers are basically compactors used to compact material such as soil and dirt. In road construction the rollers are used to press down the asphalt in place after it is laid down after the pad foot drum roller has done its job compacting the base layer to lay the asphalt on. Road making equipment may be static or vibrating ones depending on the requirement of the job at hand. Additionally various types of rollers may be used for various jobs depending on the material in use.
3. Asphalt mixing plants: An asphalt mixing plant is the machine used to produce asphalt and various other types of coated road stone. On a general note these are collectively called black top or asphalt concrete. The plan used various materials in appropriate quantities to produce the required quality and quantity of asphalt. The plant keeps the mixture hot to keep it from setting before it is laid and compacted on the road.
4. Crawler Excavator: These are heavy machines comprising of a boom, stick, bucket and cabin mounted on a rotating platform. Wheels or tracks may be used for movement of the machines. Usually tracks are used since they are softer on the top layer of the soil. These are versatile machines given the kind of jobs they can handle with its various attachments. For most parts they are used for excavating earth and rocks and moving the debris from one place to another.
5. Wheel Loaders: These heavy machines come with a considerably huge bucket mounted at the front of a tractor to pick the debris and transport it to the dump truck. The machines scoops the material in its wide bucket and safely moves it to the desired location in a jiffy. Wheel loaders are also called front loaders and are extensively used in road construction on a regular basis.
6. Truck Cranes: These are sizeable cranes used to move things on the construction site. The crane is usually mounted on the back of a lorry and consists of a carrier component and a lifting component to connected using a turn table. The turntable allows the crane to move from side to side on a pivot on the back of the lorry. The cranes are used to lift material from one place to another on the job sites. These truck cranes are usually seen on larger job sites that have enough space to allow for movement of the crane.

There may be various problems with the road construction techniques we have listed above. This will further increase the demand for road construction machinery. And sometimes there are problems that even road construction machines themselves face. Many believe that these problems may be due to fuel or technical parts of the car. Below, we focus on the problem with the driver of a modern road

construction machine. The details of this problem were covered by SoniBahat, an Indian journalist and independent researcher

- Front outrigger is not working. I was told the solenoids in these go a lot, so I decided I would take them off the outrigger and inspect them. When we hit the toggle switch, the plungers moved just fine, and to double check I swapped the up solenoid with the down solenoid, and the outrigger still did not work. I remember when we first bought the truck the outrigger would work sometimes (rarely). Now it does not move at all.
- Broke a wire coming from the hydraulic transducer going into the LMI sensor box. I removed the computer and transducer from the truck so I could take them inside to solder the wire back on. After I did this I noticed my load was showing 20 percent under what it actually is, which I find quite dangerous, especially when I am approaching my load limit during lifts. I have 2 theories for this. Air got in the hydraulic line when I took the transducer off the hydraulic line, but I'm not sure if this would have any effect at all, just applying my knowledge of brake lines in cars. Or two, when I removed the computer, it somehow reset everything back to factory settings, and it has to be calibrated.

In fact there is no modern or historical type of problem. Problems can be divided into types, such as problems that have been solved or still unresolved. Accordingly, the above-mentioned problems are likely to have existed before. In finding solutions to them, of course, we rely only on experts and professionals in the field. Most importantly, the more we repair road construction machines, the smoother we will be on the roads and the more we will be able to meet our need for modern technology.

Their unit for improving road construction machinery capacity building, partial and full automation. Limited physiological capacity or unsafe management for the accuracy required by the person and the machine in the assigned order automation of road construction machinery due to inability to control necessary and effective.

Technological changes in road construction (improved) use of machines, effective quality control, etc.) reducing costs and thereby improving the way work is done possible (justify the choice of the most cost-effective option). Therefore for the most up-to-date development of road construction technology One of the issues is quality control in the production of work is to increase efficiency and speed. In this sense, its partial or complete automation is promising. As an example can be used to monitor systems, all of which the paving of the road when the preparatory work and the main work are done correctly the required plane is provided by the given probability.

Local road - extensive use of construction materials, works rational organization, prolongation of the construction season and years of work The gradual transition to performance technology during construction step-by-step, application of new effective materials and constructions at the expense of reducing the cost of construction.

The complexity of road construction is simple at temperatures and humidity that change from time to time in atmospheric conditions. The required properties of road structures, first of all, stability must be ensured. The most optimal technology for work in certain construction conditions have to decide. The quality and cost of construction are the criteria for choosing such an option is calculated. The quality of the road is transport-operational, technological, ergonomic, aesthetic, environmental and other features, as well as service duration and other key parameters. The highway efficiency, that is, the path to a beneficial effect from use its ratio to the total cost of construction and operation is its quality level is the criterion.

Variable along the length of the road and over time soils, properties and conditions of materials, some constructive characterized by the parameters, temperature and humidity of the layers most of

the work in the construction and operation of roads The optimal method is always the required use of the method properties, and the minimum specified in its construction and use cost-effective.

The boundaries of technical progress in road construction are road in many ways increase labor productivity in construction, material consumption of facilities reducing the use of local materials and industrial waste expansion, reduction of transportation costs, shortage of materials and fuel energy saving, reliability of road construction and important scientific and technical to increase service life defined by complex problem-solving programs.

Organization of highway construction - increase of efficiency, that is, conservation using productive resources and tasks in compliance with the requirements for the quality of work developed in order to achieve the deadlines set in the plan is a set of measures to be taken and implemented.

Requirements for the use and operation of the highway to meet a number of conditions during its construction to ensure its ability required: the required strength and durability of the footpath, the road the strength of the pavement (including the constructiveness of the pavement contact zones between the layers) and the smoothness of the road surface to provide. Processing layers and pouring layers for this purpose uniformity of soils; its when the soil is plowed the thickness and moisture content of the layers are the same; spilled soil optimal moisture, density and flatness of the layers; mines and construction water must be provided on site.

The environment when repairing a highway protective measures should be taken. In production, technological not to harm the environment in making decisions, nature balance of geological, ecological and hydrogeological conditions it is important to keep in mind that there is no risk of change.

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