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Obosnovano Using aggregate-nodes method of repair of automobile transport selskohozyaystvennыh enterprises and Basic Principles of organization kooperatyvnoy forms tehnycheskoho Maintenance of cars on the basis of known method.

Transport rubbed, kooperatyvnoe Tehnicheskoe Maintenance, repair works tsentralyzatsyy radius, ostatochnыy resource.

Usage of agrarian-central method of repair of motor transport of agricultural enterprises is proved, the technique of definition of radius of centralization of auto repair work and main principles of the organization of the co-operative form of maintenance service of cars on the basis of the given method is developed.

Car, safety of traffic, tire wear, fatigue, aging, residual life.

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NEED Existence conditions SLABONELINIYNOYI Boundary problem with impulsive (Critical case)

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The equation for generating amplitudes slaboneliniynyh critical boundary problems with pulses, which defines the necessary condition for the existence of solutions to such problems.

Slaboneliniyna critical boundary value problem of impulsive, generalized Green's operator.

Problem. This article contains material that is of interest to specialists in the theory of boundary value problems and nonlinear oscillations and contribute to the development of constructive numerical and analytical methods for studying the boundary value problems.

Results. Consider the critical case when the homogeneous boundary value problem of impulsive

$$\dot{z} = A(t)z, t \neq \tau_i,\ \Delta z_{|t=\tau_i} = S_i z,\ t, \tau_i \epsilon [a,b], i\epsilon\mathbb{Z} \quad (1)$$

$$lz = 0 \quad (2)$$

has nontrivial solutions, ie $rank\ Q = n_1 < n$. While generating boundary value problem of impulsive

$$\dot{z} = A(t)z + f(t), t \neq \tau_i,\ \Delta z_{|t=\tau_i} = S_i z + a_i,\ \tau_i \epsilon [a,b], i\epsilon\mathbb{Z} \quad (3)$$

$$lz = \alpha,\ \alpha\epsilon\mathbb{R}^m, t \in [a,b] \quad (4)$$

cheeky if and only if satisfying$f(t) \in C([a,b]/\{\tau_i\}_I),\ a_i\epsilon\mathbb{R}^n, \alpha\epsilon\mathbb{R}^m$

$$P_{Q_d^*}\left\{\alpha - l\int_a^b K(\cdot,\tau)f(\tau)d\tau - l\sum_{i=1}^p \overline{K}(\cdot,\tau_i)\, a_i\right\} = 0, d = m - n_1 \quad (5)$$

while a set of mapping solutions $r-\ \ (r = n - n_1)$

$$z_0(t, c_r) = X_r(t)c_r + \left(G\begin{bmatrix} f \\ a_i \end{bmatrix}\right)(t) + X(t)Q^+\alpha, \quad (6)$$

where $\left(G\begin{bmatrix} f \\ a_i \end{bmatrix}\right)(t)$ - Generalized Green's operator boundary value problem of impulsive (3), (4), which is given by

$$\left(G\begin{bmatrix} t \\ a_i \end{bmatrix}\right)(t) \overset{\text{def}}{=} [\int_a^b K(t,\tau) * d\tau - X(t)Q^+ l\int_a^b K(\cdot,\tau) * d\tau, \sum_{i=1}^p \overline{K}(t,\tau_i) * -X(t)Q^+ l\sum_{i=1}^p \overline{K}(\cdot,\tau_i) *] \begin{bmatrix} f(\tau) \\ a_i \end{bmatrix}.$$

Consider the issue of the necessary conditions for the existence of solutions

$z = z(t,\varepsilon)$: $z(\cdot,\varepsilon) \in C^1([a,b]/\{\tau_i\}_I)$, The boundary value problem of impulsive $z(t,\cdot) \in C[\varepsilon], \varepsilon\epsilon[0,\varepsilon_0]$

$$\begin{cases} \dot{z} = A(t)z + f(t) + \varepsilon Z(z,t,\varepsilon), \quad t \neq \tau_i \in [a,b], \\ \Delta z|_{t=\tau_i} - S_i z(\tau_i - 0) = a_i + \varepsilon J_i(z(\tau_i - 0,\varepsilon),\varepsilon),\ i = 1,\dots,k, \\ lz = \alpha + \varepsilon J(z(\cdot,\varepsilon),\varepsilon). \end{cases} \quad (7)$$

which when rotating in generating solutions (6) generating boundary value problem with impulse action (3), (4). The answer to this question is the following theorem.$\varepsilon = 0 z_0(t, c_r)$

Theorem. Let slaboneliniyna boundary value problem of impulsive (7) satisfies the above mentioned conditions and has a solution, and which rotates at a generating solution (6) generating boundary value problem of impulsive (3), (4) with a constant.$z(t,\varepsilon): z(\cdot,\varepsilon) \in C^1([a,b]/\{\tau_i\}_I) z(t,\cdot) \in C[\varepsilon], \varepsilon\epsilon[0,\varepsilon_0] \varepsilon = 0 z_0 = z_0(t, c_r^*) c_r = c_r^* \in \mathbb{R}^r$

At constant vector satisfies the equation:c_r^*

$$P_{Q_\alpha^*}\left\{I(z_0(\cdot, c_r^*), 0) - l\int_a^b K(\cdot,\tau) Z(z_0(\tau, c_r^*), \tau, 0) d\tau - l\sum_{i=1}^{l} \overline{K}(\cdot,\tau_i)\, I_i(z_0(\tau_i - -0, c_r^*), 0)\right\} = 0 \qquad (8)$$

Proof. Let slaboneliniyna boundary value problem of impulsive (7) has a solution, and which rotates at a generating solution of (6) with constant conditions of existence (5) generating solution is assumed to be performed. Then, considering the fairness condition (5), we get that for all nonlinear vector function and nonlinear vector functionals satisfying $rank\ Q = n_1 < n z(t,\varepsilon): z(\cdot,\varepsilon) \in C^1([a,b]/\{\tau_i\}_I) z(t,\cdot) \in C[\varepsilon], \varepsilon\epsilon[0,\varepsilon_0] \varepsilon = 0 z_0(t, c_r^*) c_r = c_r^*. \varepsilon\epsilon[0,\varepsilon_0] Z(z(t,\varepsilon), t, \varepsilon) I_i(z(\tau_i - 0, \varepsilon), \varepsilon), I(z(\cdot,\varepsilon), \varepsilon)$

$$P_{Q_\alpha^*}\left\{I(z(\cdot,\varepsilon),\varepsilon) - l\int_a^b K(\cdot,\tau) Z(z(\tau,\varepsilon),\tau,\varepsilon) d\tau - l\sum_{i=1}^{p} \overline{K}(\cdot,\tau_i)\, I_i(z(\tau_i - -0, \varepsilon), \varepsilon)\right\} = 0 \qquad (9)$$

Now suppose that condition (8) is not satisfied. Then, as tends to under-vector and vector-function and continuous functionals on and in the vicinity and there is quite a small number, just in inequality$z(\tau,\varepsilon) z_0(t, c_r^*) \varepsilon \to 0, Z(z,t,\varepsilon) I_i(z(\tau_i - 0,\varepsilon),\varepsilon), I(z(\cdot,\varepsilon),\varepsilon) z\ \varepsilon z_0(t, c_r^*) \varepsilon = 0 \varepsilon = \varepsilon_1 \varepsilon\epsilon[0,\varepsilon_1] \subset [0,\varepsilon_0]$

$$P_{Q_\alpha^*}\left\{I(z(\cdot,\varepsilon),\varepsilon) - l\int_a^b K(\cdot,\tau) Z(z(\tau,\varepsilon),\tau,\varepsilon) d\tau - l\sum_{i=1}^{p} \overline{K}(\cdot,\tau_i)\, I_i(z(\tau_i - 0, \varepsilon), \varepsilon)\right\} \neq 0,$$

That contradicts the condition (9). Thus, our assumption is not true, and that proves the validity of the theorem.

$$F(c_r) = P_{Q_\alpha^*}\left\{I(z_0(\cdot, c_r), 0) - l\int_a^b K(\cdot,\tau) Z(z_0(\tau, c_r), \tau, 0) d\tau - l\sum_{i=1}^{l} \overline{K}(\cdot, \tau_i)\, I_i(z_0(\tau_i - 0, c_r), 0)\right\} = 0 \qquad (10)$$

Attribute. The equation will be called the equation for generating amplitudes slaboneliniynoyi boundary value problem of impulsive (7).

The vector of (10) defines the amplitude of oscillations described by generating solution (6) generating boundary value problem of impulsive (3), (4). If equation (10) has a solution, then the vector that causes generating solution, which may correspond to junctions, the initial boundary value problem of impulsive (7). However, if the equation (10) has no solutions, then the boundary value problem (7) has no solutions in the class of piecewise continuous differentiated by discontinuities of the first kind with, for continuous vector functions.$c_r = c_r^* \in \mathbb{R}^r c_r^* z_0(t, c_r^*) z(t,\varepsilon): z(\cdot,\varepsilon) \in C^1([a,b]/\{\tau_i\}_I) z(t,\cdot) \in C[\varepsilon], \varepsilon\epsilon[0,\varepsilon_0] z(t,0) = z_0(t, c_r^*) tt = \tau_i \varepsilon\epsilon[0,\varepsilon_0]$

Conclusion. A theorem and the necessary conditions for the existence of boundary rozv'yazkivslaboneliniynyh zadachdlya systems of ordinary differential equations with impulse action in the critical case.

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Will provide a porozhdayuschyh equation for the amplitudes slabonelyneynыh CRITICAL kraevыh problems with ympulsnым Impact, something determines neobhodymoe Terms existence of solutions of such problems.

Slabonelynyyna krytycheskaya kraevaya problem with ympulsnыm Impact, obobschennыy operator Green, amplitudes equation, nonlinear vector function.

An equation for generating the critical amplitudes of weakly nonlinear boundary value problems with impulse action that defines necessary condition for the existence of solutions of such problems.

Slaboneliniyna critical boundary value problem of impulsive, generalized operator Green's equation for generating amplitudes.

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RESEARCH POWER CHARACTERISTICS SHELVES PLOWING COMPONENT OF A RATIONAL SURFACE CURVATURE

VP Chicken Engineer

The description of the methods of field research and made aniliz the data, to compare the characteristics of power efficient plowing component shelves with existing curvature.