Improving the process of designing route maps in production

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Model of technological process transition using a route map

Route map

\[ N_{i0}^{e} \quad R_{C1} \quad I_1 \quad t_{TP1} \quad O_{1I_{PL}} \]
\[ N_{11}^{e} \quad R_{C2} \quad I_2 \quad t_{TP2} \quad O_{2I_{PL}} \]
\[ N_{1j}^{e} \quad R_{C3} \quad I_3 \quad t_{TP3} \quad O_{3I_{PL}} \]
\[ \cdots \]
\[ N_{ipj}^{e} \quad R_{Cn} \quad I_n \quad t_{TPn} \quad O_{nI_{PL}} \]

\[ P_{mop1} \]
\[ P_{mop2} \]
\[ P_{mop3} \]
\[ P_{mopn} \]

\[ R_c \quad M \quad t_{TPn} \quad I_n \quad \cdots \]
Addressing the process of search for transitions in the archive of technological processes
### Example of transition table

<table>
<thead>
<tr>
<th>Date</th>
<th>$R_{cn}$</th>
<th>$t_{TP}$</th>
<th>$t_f$</th>
<th>ln</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.02.2019</td>
<td>DMU 100</td>
<td>0.5</td>
<td>0.5</td>
<td>P Ivanov</td>
</tr>
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<td>12.12.2018</td>
<td>DMU 75 R</td>
<td>0.6</td>
<td>0.7</td>
<td>A Sidorov</td>
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<tr>
<td>11.10.2018</td>
<td>DMU 75</td>
<td>0.65</td>
<td>0.9</td>
<td>B Novikov</td>
</tr>
<tr>
<td>02.06.2018</td>
<td>DMU 75</td>
<td>0.65</td>
<td>1</td>
<td>P Ivanov</td>
</tr>
</tbody>
</table>
Conclusion

The proposed algorithm for designing route maps based on the archive of technological processes allows bringing the process of planning route maps to a real situation, which is characterized by one of the important characteristics, which is the accessibility to the execution of technological operations at the workcentre. The proposed mechanism allows using the data to analyse the speed of technological operations, to assess the work of subordinates, as well as to plan the loading of performers in production.
Thanks for attention