Table 1

<table>
<thead>
<tr>
<th>No</th>
<th>Elasticity modulus E, MPa</th>
<th>Poisson’s constant</th>
<th>Uniaxial compression strength, MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5000</td>
<td>0.25</td>
<td>25</td>
</tr>
</tbody>
</table>

Physical and mechanical properties were generated according to Gaussian law with the variation of 5, 10, 15, 20, 25, and 30%. (Table 1)

Our research made it possible to define dependence of reserve strength ratio on the initial data variation.

Thanks to the development of numerical model we can draw a conclusion that it is possible to have more accurate calculations (change of strength reserve coefficient by 25% is quite a considerable factor), if structural heterogeneity is taken into account.

Figure 1 - Calculating model of crane-runway beam

References: