On the basis of the use the ANSYS system with finiteelement

analysis a 3-D model of the high level of accuracy

for the crank gear of air compressor is developed. For the

developed model is carried out the determination stressstrained

state, which occurs at the beginning of the operation

of compressor and at the moment of the time expiration of its

service. The analysis of the obtained results made it possible

to establish change stress-strained state for entire period of its

work. The procedure of the problem's solution consists of

two basic stages - solution of contact problems for crank gear

of the assembled form, and solution of separate problems for

the crankshaft and the pistons with the use of the obtained

solutions of contact problems. The obtained results made it

possible to establish that substantial change stress-strained

state in this crank assembling does not occur in the time of

the operation. These results can be used for definition the

problem of resort diagnostics. Tabl. 4. Il. 5. Bibliogr. 3

names.