Purchase Requisition No. 1000015584 (SRM/RFX No. 6100000406)

Technical specifications for Ansys and Rocky Academic Software

The software should be capable to carry out the following tasks:

1. Solve the fully 3D Navier-Stokes equations and energy equations for calculating fluid flow and heat transfer with both constant and variable properties.

2. Solve the above equations in an arbitrary domain with both stationary and moving domains.

3. Solve for the structural deformations and stresses through finite element methods (FEM).

4. Solve for the acoustics equations to calculate the noise in the considered domains.

5. Employ moving mesh techniques to solve for rotating domains.

6. Solve for granular flow using particles of arbitrary shapes.

7. Incorporate particle breakage into granular flow.

8. Coupling of the granular flow equations to the computational fluid dynamics equations.

9. Coupling of the granular flow equations to the FEM equations.

10. Coupling of the granular flow equations to the acoustics equations.