Simulating Calculation of the Firefighting Water Flow by using the ANSYS Software

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Abstract: Firefighting aircrafts have different technical parameters. Each aircraft can contain from 3 to 6 tons of water and when it arrives at the suitable position for firefighting, it will flush whole water down to the fire. By the above water flushing firefighting method together with the necessary time for the aircraft to go to take water and come back to flush water the firefighting effect is quite limited. Hence calculation of the optimal use of water contained in the aircraft to get the biggest effect in firefighting in forests is very essential. However a correct calculation of processes in the space and time in most cases is impossible due to the complexity, the number of parameters and describing equations is so big that it makes the solution searching more difficult. In this article we show some first results by using the ANSYS software to simulate the firefighting water flow in order to flush water optimally to stop the fire by using the firefighting aircraft KA-32.

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