

# [Fire service personnel management](https://assignbuster.com/fire-service-personnel-management/)

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The paper " Fire Service Personnel Management " is a great example of an essay on engineering and construction. Water Hammer is a phenomenon that refers to the stuttering reverberation that is heard in a pipeline as a result of an unexpected change in the water’s flow rate. Water Hammer effect is produced by opening and shutting a valve too promptly and there could be a pressure build up due to these effects. The pressure that is developed due to these effects could damage the hose and it is important that the firefighter minimizes the risk of a hose damage that is caused by “ water hammer” (Edwards, 2000).   
Hose damage is highly detrimental to the firefighting process and the firefighter must be aware of this. In reducing the chances of hose damage, the firefighter must be highly skilled in controlling the water hammer effect. This is done by steadily controlling the flow of water that is used in the firefighting process and making sure that the flow of water is not more than what the hose can withstand.   
The firefighter must have the basic knowledge of the application of hydraulic retardants and the pressure relief valves in controlling the water hammer effect. Since pressure is developed as a result of the water effect, the firefighter fits the pressure relief valve to the hose to reduce the risk of any damage to the hose that could be caused by the pressure build up (Edwards, 2000).   
The chances of hose damage could also be minimized if the firefighter uses water retardants that help slow down any abrupt change in the velocity of the water, hence, reducing the risk of the creation of the water effect to the least probability.   
While trying to reduce the risk of the water hammer effect, the firefighter must bridge the gap between the amounts of water that is required in fighting a fire and the required water flow rate that is less likely to damage the hose.