

## Vibration damping algorithms for steered fire ladders and hoisting machines

### Development overview (project idea)

### Developer information

Scope of application    Emergency-rescue and special equipment  
                                  Robotic machines with elastic manipulation devices

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Abstract                    Enhancing the reliability and efficiency of software-controlled  
                                  lifting equipment

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Brief description        The development is aimed at improving the performance of  
                                  modern cranes and controlled fire ladders with software  
                                  control by improving the algorithmic basis of the control  
                                  system, i.e. without changing the mechanical part  
                                  of the device

Research field – mathematical control theory and stability theory of  
complex mechanical systems

### Expected result from implementation.

Development stage      An algorithmic model has been created

Term of  
commercialization      12 months

Environmental result – reduction in fuel consumption at operation of  
the special equipment due to optimization of maneuvers when carrying  
out emergency rescue operations

Possible sources of  
Investment                Budget funds, grants, funds of business entities  
                                  in the relevant field, other  
                                  sources not prohibited by law

Social result – speeding up the emergency-rescue operations and  
enhancing the reliability of the latest emergency-rescue vehicles  
with computer controlled modules

Volume, conditions  
and financing  
schedule                    Financing based on concluding an agreement  
                                  with the investor. The financing term is 1 year