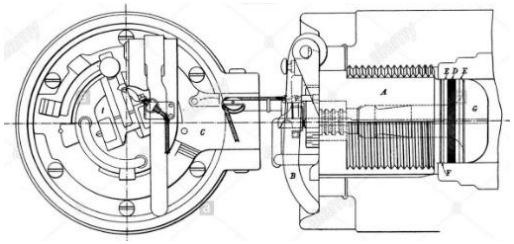
DEP MeshWorks

Investigation into breech mechanism operation and evaluating motor torque rating

About the Client

The client is one of the premier defense research and development agencies dealing with Howitzer gun development besides many other types of ammunition.



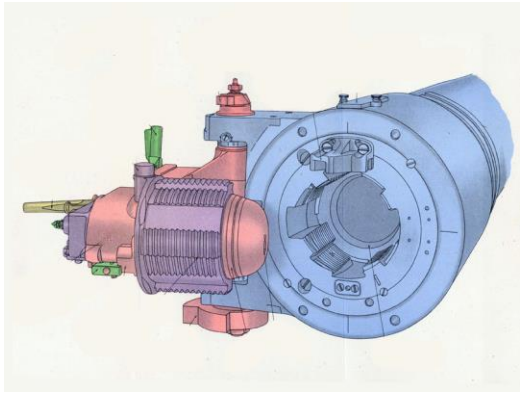
The Challenge

The client was interested in having DEP and its partner build a multi body dynamics model for the breech mechanism that would help evaluate the performance and identify the motor that would be the right fit for opening and closing the breech mechanism as per the requirement.

The Solution

The DEP team started with input CAD data from the premier defense research and development agency and converted it into functional multi body dynamics models using state of the art tools. The model was built to evaluate the performance of the entire mechanism that included forces and torques.

Based on the specification provided by the client, DEP team created the input motion profile and studied the entire mechanism performance. The contact forces at various important locations were studied to assess the structural impact. The resultant torque was extracted and validated against the motor specification data sheet.



The Result

DEP team carried out very detailed investigation in the short span of time. DEP team's expertise to handle complex mechanism and look at interdisciplinary aspects added significant value to client.

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