

Zheng Sun

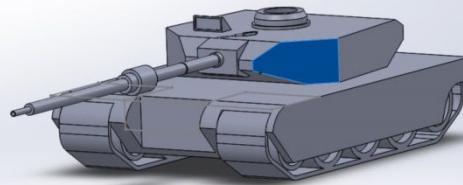
EDSGN 100,Section025

11/30/2013

Tank

I chose to create a tank for my final CAD project because I thought it would be a fun and challenging piece to create. It has many moving parts and some “simple” mechanisms.

One major difficulty I encountered early on was the wheel parts. It was really hard for me to create the apron wheels for it is too complicated and I do not have enough time to finish it, instead I made



a model that basically looks like a tank wheel. Also making the nose part is quite hard. At first I was thinking of making a column and cut it from the side. Then I realized that it is not a good idea as it is quite hard to find the proper position and also it does look really nice. After brainstorming I decided to make different planes so that I could make each part of the nose separately. And it did work.:-)

As I am major in mechanical engineering, the project truly relates to my major because as a military units and transportations, it appears a lot in real life. it would involve such mechanics as kinematics, forces, momentum, rotational inertia (in the wheels), and torque (to turn the handlebars and use the pedals). Also as I am a fan of militaries, I felt so happy after I finished this project for it is made by my own hand.

From this project I have learned more about how to use CAD Solid works, becoming much more used to it, as well as learning how to predict pitfalls early on as one plans ahead in the design. Also, during the project I may find something really difficult and some skills that I have not learned yet. The good thing is that I could review the skills I have already learned and

learn some new skills by myself as well. I did enjoy this project, because I enjoy learning new skills, solving problems, and creating things.

I got some information online and reproduct with the picture below. Basically I followed the sized but I do not have more pecific information so I just made some of it by myself.



-other parts of the tank

tank nose(tank gun)

As the tank's primary armament, they are almost always employed in a direct fire mode to defeat a variety of ground targets at all ranges, including dug-in infantry, lightly armored vehicles, and especially other heavily armored tanks. They must provide accuracy, range, penetration, and rapid fire in a package that is as compact and lightweight as possible, to allow mounting in the cramped confines of an armored gun turret.



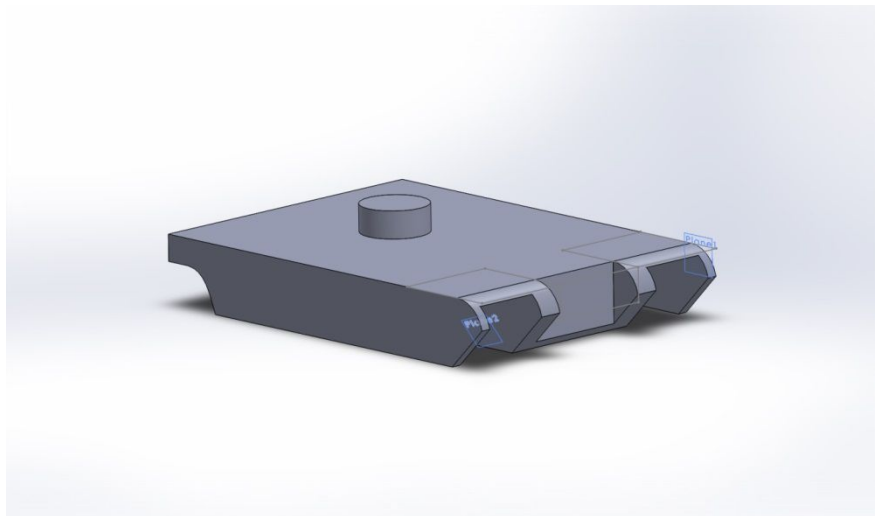
Machine gun

The tanks' main armament is a smooth-bore or rifled gun (most of modern tanks are fitted with smooth-bore guns). The guns are used for direct fire, although indirect fire is also possible. The latest tanks are armed either with 120 mm gun (NATO calibre) or 125 mm gun (originated in the former Soviet Union). советский калибр»). The gun barrels are usually fitted with a thermal sleeve



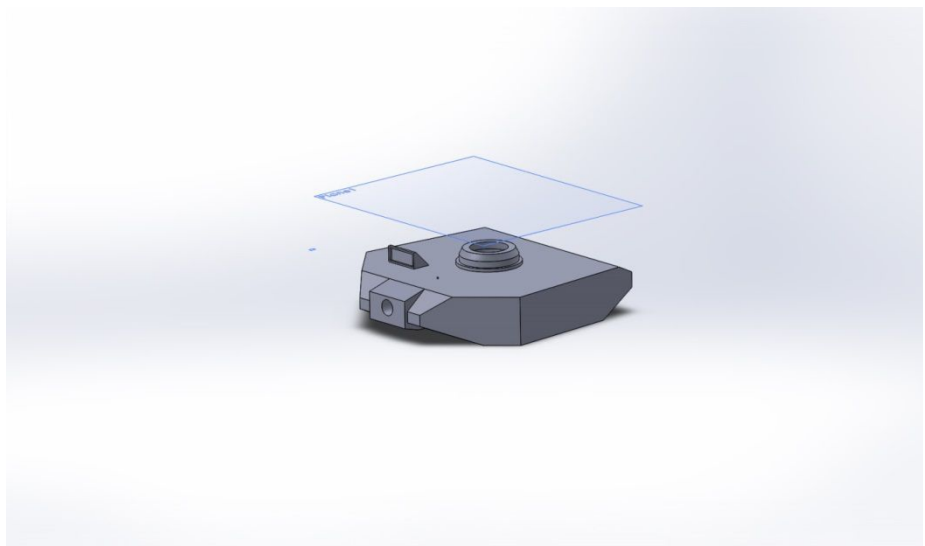
tank body

place for driving the tank and processing tank nose

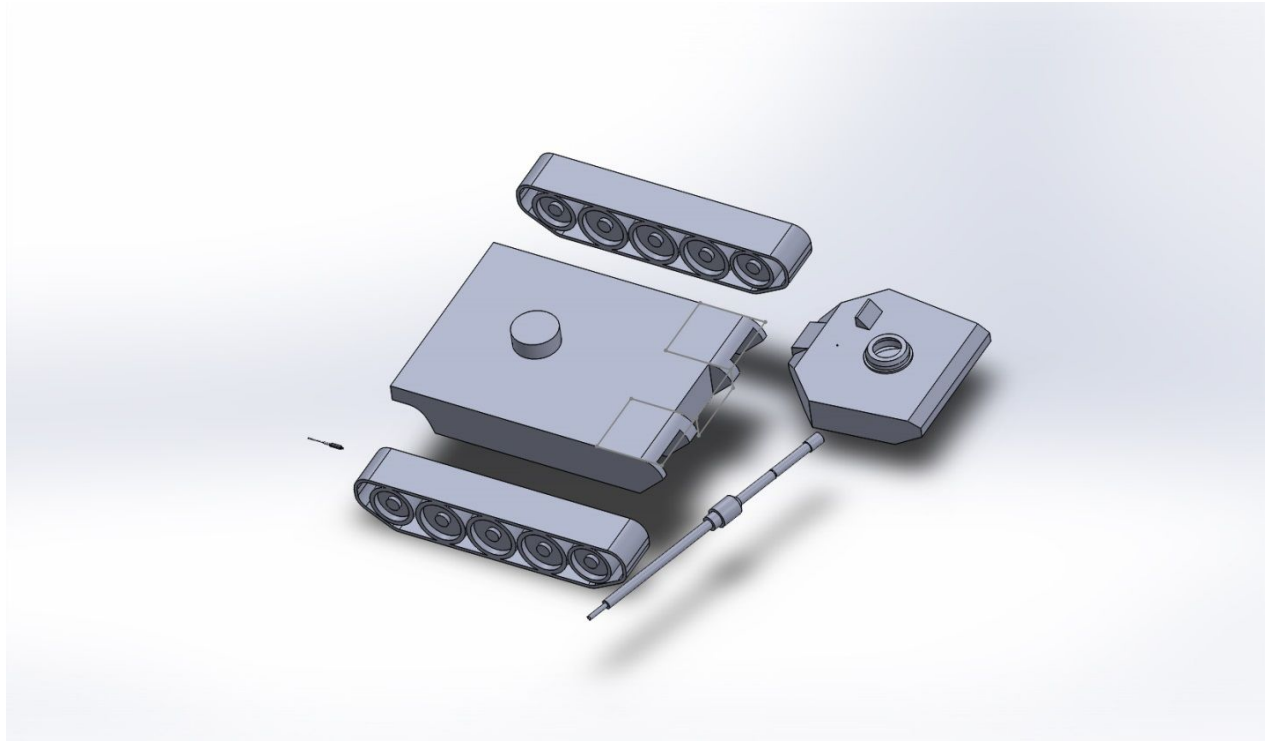


Tank head

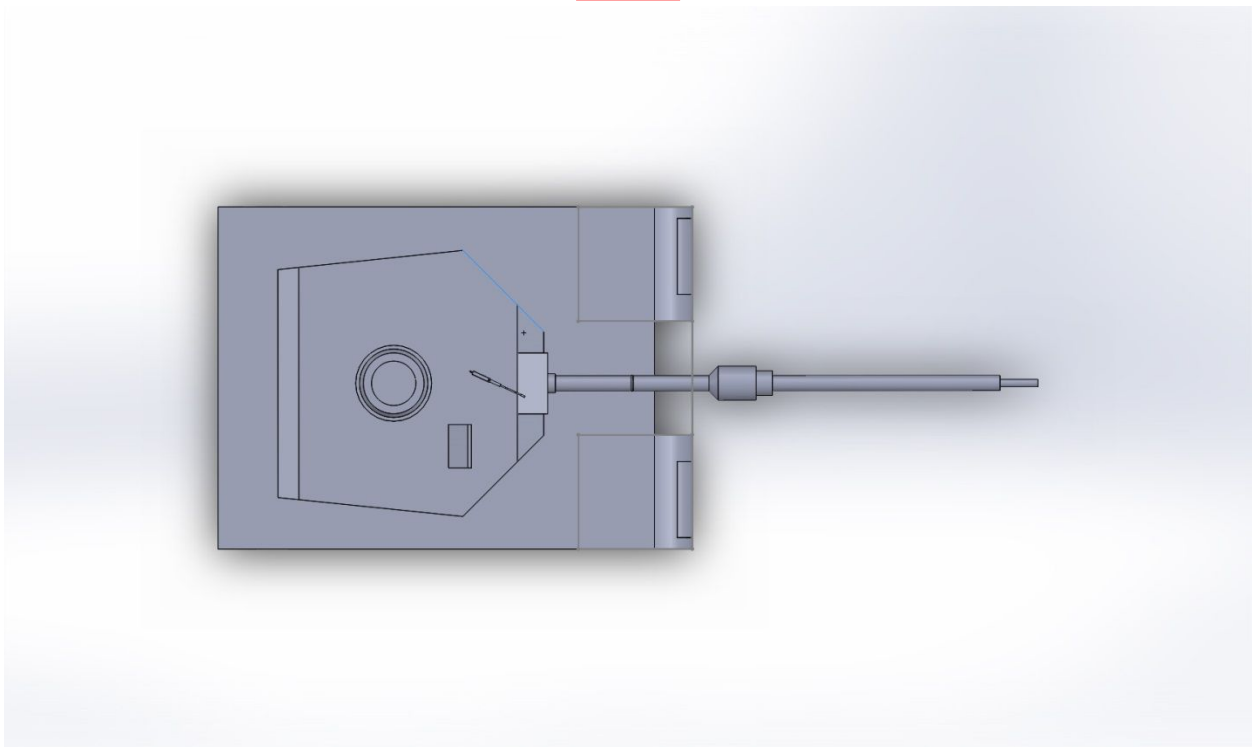
Processing machine guns with entrance out of the tank .

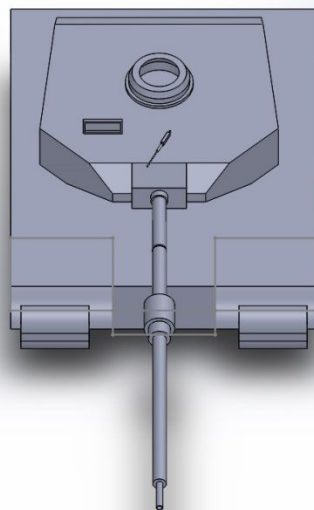
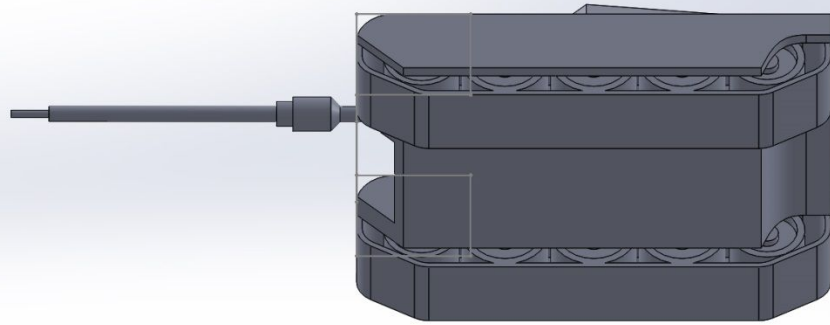


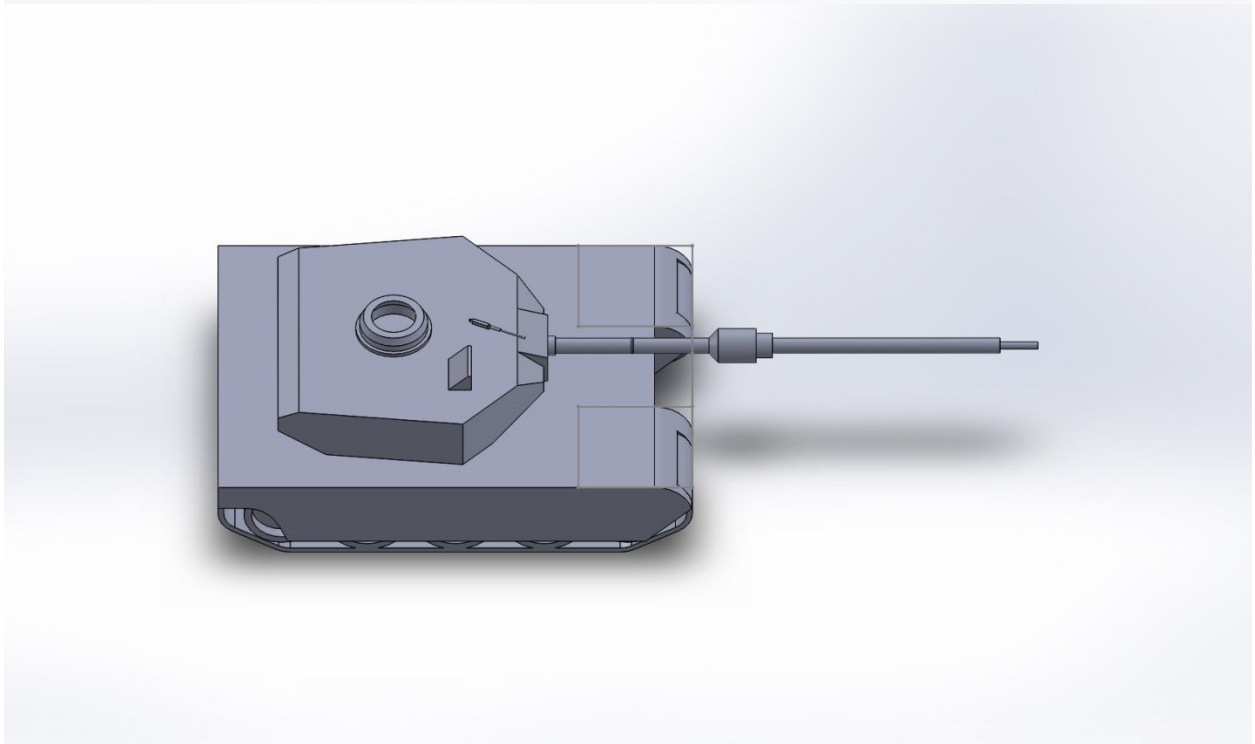
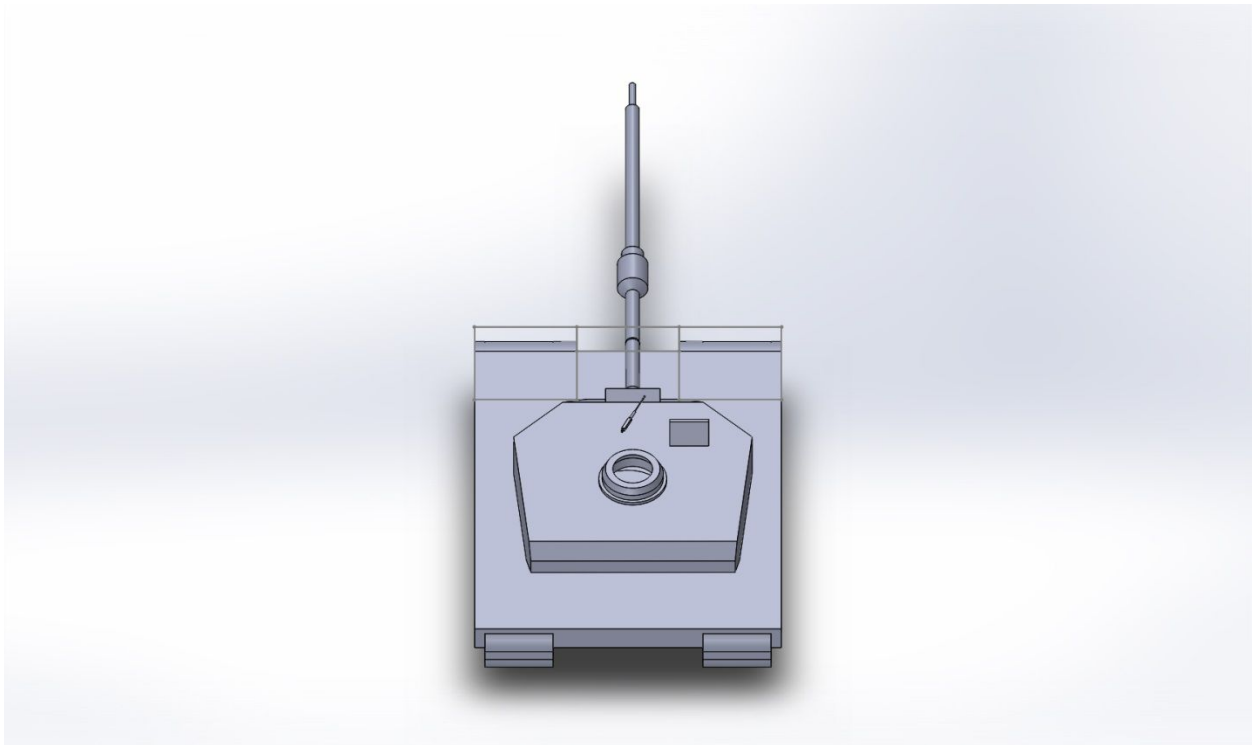
Below are more pictures to show the fetures of the tank ,the 3-d drawing with the osmetic view and the

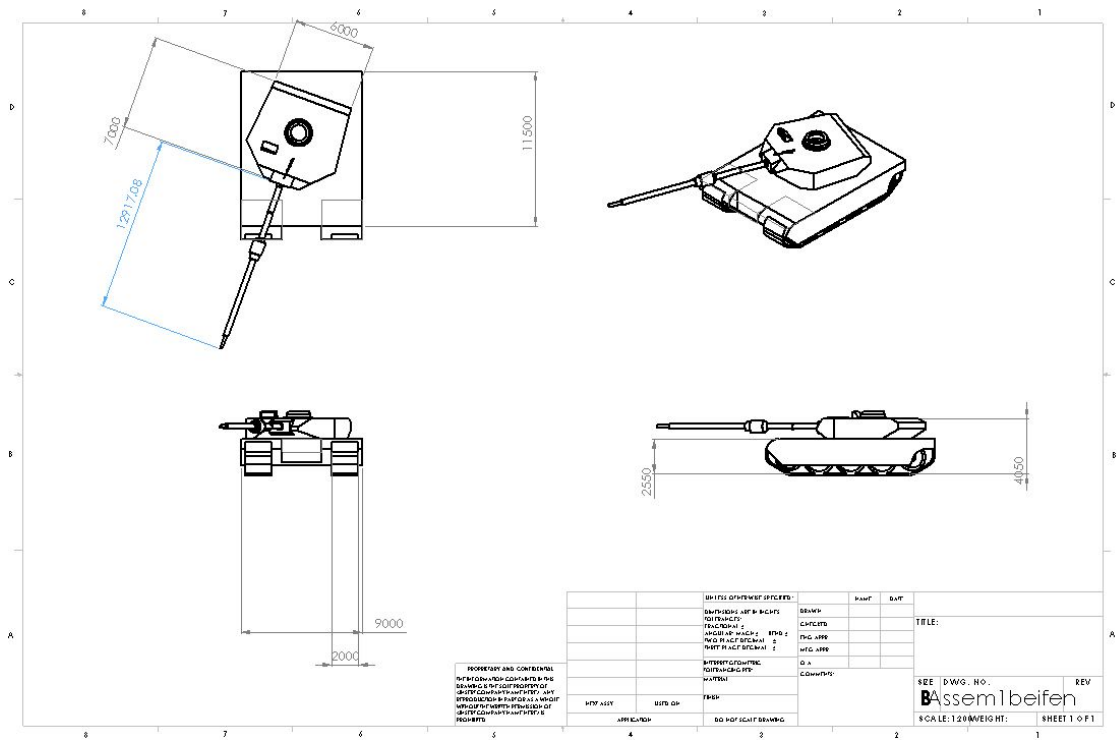


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Reference

<http://en.wikipedia.org/wiki/Tank>