



Indian Institute of Technology Delhi

MET 420 Summer Practical Training

Mechanical Engineering Department

Weekly Report - 4

505 Army Base Workshop
Delhi cantt. 110010
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Production & Industrial Engineering

Week - 4

Summary

This week we were officially allocated our project which is Gun Control System. We issued précis related to this through library at Army Base, and started reading theoretical concepts to it. For practical demonstrations, we would often take the permission from workshop coordinator and go inside the tank in full assembly or its sub part to get a clearer picture. However, since the tank is only repaired here, we cannot see the Gun Control System in full function.

We went through the TEG workshop which looks after the Gun Control Section here (along with the GCECV workshop in the manufacturing cell) and learned about their working methodology here. The Gun Control System is the heart of the Tank T-72 and Colonel Sir seemed very pleased with the students who have taken their project in this section and he said he is looking forward for some fine contributions related to this.

Gun control system

- A fire-control system is a number of components working together, usually a gun data computer, a director, and LASER, which is designed to assist a weapon system in hitting its target.
- It performs the same task as a human gunner firing a weapon, but attempts to do so faster and more accurately.

Current System

- Gunner's Range Finding Unit TPD-249
- Δ-D Mechanism

- Present time to find the location of target we release the LASER Beam on the target direction and the returning beam gives the location of target and we aim the target.
- “But continuously moving targets cannot be traced by tank.”

Range Finding Unit

- 1000m-4000m
- Sets the gun on the target.
- The unit combines the properties of an optical Gyro stabilized sight whose field of view is stabilized in elevation, and of a monocular stereoscopic range finder.

Δ -D Mechanism

- Maintains the gun on target despite the movement of tank.
- Consists of techno-generator and the cosine potentiometer.
- Together they form a feedback mechanism, and keep the gun on target.