

ABSTRACT

AIR BRAKE SYSTEM USING EXHAUST GAS

The aim is to design and to develop an air brake system based on exhaust gas is called “fabrication of air brake system using engine exhaust gas”. The main aim of this project is to reduce the workloads of the engine drive to operate the air compressor, because here the compressor is not operated by the engine drive. Here we are placing a turbine in the path of exhaust from the engine. The turbine is connected to a dynamo by means of coupling, which is used to generate power. Depending upon the airflow the turbine will start rotating, and then the dynamo will also starts to rotate. A dynamo is a device which is used to convert the kinetic energy into electrical energy. The generated power can be stored in the battery and then this electric power has loaded to the D.C compressor. The air compressor compresses the atmospheric air and it stored in the air tank and the air tank has pressure relief valve to control the pressure in the tank. The air tank supplies the compressed pneumatic power to the pneumatic actuator through solenoid valve to apply brake. The pneumatic actuator is a double acting cylinder which converts hydraulic energy into linear motion.

Keyword: - Dynamo, DC Compressor, and Pressure relief valve etc....