PROJECT TITLE

Pulse Jet Engine run by wood gas as fuel

Brief: First of all, what is wood gas?

Wood gas is a syngas fuel which can be used as a fuel for furnaces, stoves and vehicles in place of gasoline, diesel or other fuels. During the production process biomass or other carbon-containing materials are gasified within the oxygen-limited environment of a wood gas generator to produce hydrogen and carbon monoxide. These gases can then be burnt as a fuel within an oxygen rich environment to produce carbon dioxide,water and heat. (#wikipedia)

And Pulse Jet Engine?

A **pulse jet engine** (or **pulsejet**) is a type of jet engine in which combustion occurs in pulses. (#wikipedia)

A typical pulse jet engine looks like the one mounted on the small plane.

Is it possible to complete the project in 45 days?

For people who doubt about the difficulty level of the project, it is better to go through the sources from where the idea have come up.

1) https://www.youtube.com/watch?v=GGx-iqYjeLs
2) https://www.youtube.com/watch?v=D1EHZPjLNHk

So it is basically possible, made and tested before.

Concept (rough idea) :

Basically we'll try to make a system that produces wood gas, will be called Gasifier. Wood Gas is produced by heating dry wood (not burning). Heating wood in absence or very less oxygen makes it red hot and all the combustible hydrocarbons and hydrogen are produced in the gas. It acts as a very good fuel. Secondly a pulse jet engine will use this fuel to produce thrust force which can be used to propel a bicycle or bike at a very good speed. Basic mechanism of a pulse jet engine is that it taken in the atmospheric air to compress it 3 or 4. This compressed air is then mixed with gaseous fuel and combusted. Combustion produces thrust force that can be directed out of the engine by a long pipe. Varying the cross section of the mouth of exhaust pipe varies the speed.