Energy efficient multi-fuel portable cook stoves (Harsha)

Product/Process Profile

Harsha portable cook stove is suitable for cooking in eco-friendly condition with various solid biomass fuels at a significantly low fuel consumption level. Fuel in the stove burns in two stages through continuous supply of preheated primary and secondary air by natural draught. This results into a clean and high temperature of flame along with complete combustion of solid fuels with minimized smoke and pollution.A perforated MS combustion chamber, corrugated grate with ash scrapper, air jacket, ash holder and top plate with pot support are the main design parameters of the stove. The stove can be manufactured in different sizes for household and community use. Fuel saving over conventional cook stoves is 50% or more.

Application Area

- Smokeless cooking in household and community environment with reduced fuel consumption.

Advantage

- Portable, multi-fuel, environment friendly and low cost cooking medium suitable for rural and semi-urban households and , primary educational and health centers. Cottage and small scale manufacturing, ideal for MSMEs.

Major Raw Materials/Plant Equipments/ Machinery/Gadgets

- Wielding/Power press/Sheet cutting/Grinding machines, Mild steel sheets/flats/rods/angles

Scale of Development

- Stoves of cooking capacity for 5-500 by licensees

Validation Level

- Lab and field level validation. The design and stove performance is accepted by *Bureau of Indian Standards (*IS:13152-2013).

Commercialization Status

- Technology marketed through a large number of licensees allover India. Beneficiaries include MSMEs and Govt. Departments/NGOs working in rural/social sector.

Techno-economics

- Rs. 10.00 Lakhs investment for a unit to prepare 1000 units/month.
- Cost of a stove for house hold usage: Rs 500.

IP Status

- Patent 166168 in public domain. Design and stove performance has been accepted by *Bureau of Indian Standards (*IS:13152-2013).

Technology Package

- Know-how, engineering drawing , training and demonstration