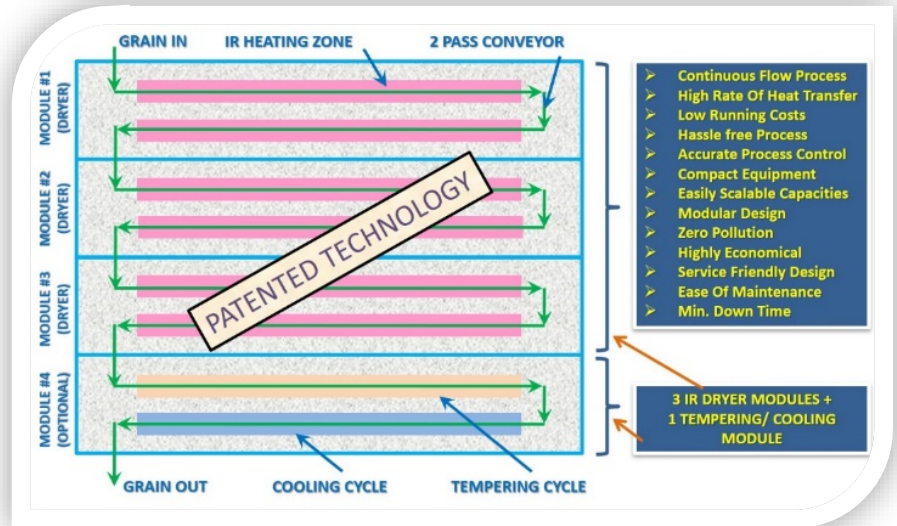


Continuous Process Flow Type Infrared Drying Equipment in Modular Design

APPLICATIONS

Need for drying in Food Industry

- ❖ Drying is the core process of any food processing industry needed in raw, semi-processed or processed stages.
- ❖ Drying is needed in rice mills, corn mills, Cereals, vegetable dehydration industries etc.
- ❖ Drying is an universal requirement and the conventional dryer technology being used was invented in 1950 and remains till-date.



INVENTORS

MR. SRINATH SREENIVAS
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CATEGORIES OF THIS INVENTION

- ❖ CROP HANDLING
- ❖ MACHINE AUTOMATION



INTELLECTUAL PROPERTY

- ❖ 201941024667
- ❖ 202041005001

TECHNOLOGY

A Novel Continuous Process Flow Type Infrared Drying Equipment in Modular Design for a Faster, Cleaner, Efficient & Controlled drying.

- ❖ Modular design with Plug & Play Stack-up construction for easy scaling up & deployment
- ❖ Multi heat zones / module with individual Temp. control to suit the preferred rate of drying
- ❖ Precise Auto-heat function with dimmers for Energy Optimization with feedback controllers
- ❖ Elegant & unique 2 pass conveyor design for smooth grain handling eliminating grain damages during process
- ❖ Optimised Forced air circulation with state of the art air management system for efficient aeration
- ❖ Intermittent ratios of drying and tempering can be customised to suit end user requirements
- ❖ Capacity ranges : 1 T/Hr to 10 T/Hr achieved by simple addition of modules in vertical stack-up arrangement

PROBLEM ADDRESSED

The existing Convectional dryers have 3 Major issues – Pollution, Labour & Quality Losses

- Pollution:** The existing contemporary dryers use convectional heating method using steam generated by burning rice husk & fire wood causing extensive of air pollution on a daily basis
- Labour:** rice mills also adopt the age-old method of air drying of Paddy by spreading out on prepared land which includes intense labour. Also, harsh working condition on hot summer days and monsoon season affect drying process.
- Quality:** The existing dryers generate broken rice content ranging from 5% ~ 15% depending on variety of rice being dried i.e. raw, Parboiled, steamed etc representing a loss of Rs. 1.5Lakhs per 100Tonnes rice dried as Cost of Poor Quality which is the average daily capacity of many rice mills in India.

ADVANTAGES

- ❖ Electric IR dryer size is <7% as compared to a conventional dryer % equipment cost is less than 30%.
- ❖ IR heating for max efficiency with Temp control within 1 deg C.
- ❖ Optimum running cost [Rs. 0.50/Kg to Rs. 0.75/Kg of grain (depending on % MC)].
- ❖ Zero breakage- Max. process yield with zero percent grain breakages or damages.
- ❖ Zero pollution- Environmentally friendly process using 100% clean energy.
- ❖ Vacuum tempering module option as add-on (patented technology)
- ❖ Fully automated equipment using sensors & PLC controlled process.

REACH US

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