



IIT ROORKEE



NPTEL ONLINE
CERTIFICATION COURSE

TECHNOLOGY OF MOLDING

Molding Machines

Dr Pradeep Kumar Jha
MIED



Moulding machines

- Advantages of machine molding
 - Saving in time
 - for mass production
 - Casting obtained uniform in size
 - Even semiskilled workers can do

Molding Machines

- Hand operated molding machines
- Power operated molding machines
 - [Hand Operated moulding machines](#)

One or more of operation like ramming, pattern drawing, mold rolling-over are performed by machine which is manually operated. They don't make use of external power. Depending on type of operation performed, hand molding machines may be pattern-draw type or pattern draw & Squeeze type.

Molding Machines

Power operated molding machines

- They make use of hydraulic and pneumatic action to perform various operations during molding process, such as raising or lowering table for pattern withdrawal, ramming the sand by jolt, Squeeze or Combined jolt & squeeze action.
 - No fatigue to workers.
 - Pneumatic jolt-roll over molding m/c.

Sand Ramming Methods

- Squeezing
- Jolting
- Jolt & Squeeze
- Slinging

Coremaking machines

- Jolt machine: Jolt table used in ramming many core boxes.
- Shell core machine: Principle of shell molding used
- Sand thrower or slinger: Suitable for large sized core boxes
- Core blower: used for rapid production of small and medium sized cores. Core box is simultaneously filled with sand and rammed by a sand carrying air stream.

Sand preparation equipment

- Magnetic separator
- Riddle
- Muller
- Aerator

Tools for hand molding

- Trowels
- Heart and square tool
- Rammers
- Cleaners and lifters
- Vent wire
- Slick
- Swab
- Drawspike
- Riddle



THANKS

