

Lean & Safety

- The idea of Lean has been around since the 1500's
- 1930 Kiichiro Toyoda came up with the modern lean - Toyota invented Toyota Production System (TPS)
- Lean is a method for making a process **more efficient**.
- Lean focuses on **continuous improvement** and **waste reduction**.
- **Engagement of People** is the essence of Lean Safety.
- Improving efficiency is best improved by asking the workers who perform the work.
- **Kaizen** - continuous improvement.
- **Muda** - All activities that wastefully consume resources but do not add value.
- **Muri** - Avoid overburdening employees or equipment.
- **Flow** - achieved after waste is removed from the process and the system runs smoothly.
- **Pull** - Avoid overproduction/overstocking by relying on customer orders to determine levels.
- **"Just in Time"** - term used at Toyota; describes how material should be processed and moved in order to arrive "just in time".
 - JIT is Based on a pull system rather than a push system (based on future customer projections)
- **Poka Yoke** - means fail proof; e.g., Airplane restroom lights only come on when the door lock is engaged.
- **Takt Time** - Time it takes to fulfill customer demand, and processes are adjusted to takt time to prevent overproduction or underproduction
- **8 wastes of Lean**
 - Defects, overproduction, waiting, not using employees, transportation, inventory, motion, & extra processing

