I1.4 – Design of Material Storage System

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Problem Statement
- Inefficiencies result from operators leaving empty spools anywhere in the production floor space.
- The lack of a centralized, efficient storage system and protocols lead to inefficient material handling, safety, people movement, and general housekeeping issues.

Project Purpose
- Design and identify a storage system and accompanying operational protocols to store spools not currently used in production.
- Improve organization and housekeeping of the facility by providing a centralized storage system for empty spools at a cost of < $10K.
- Create a user-friendly storage system.
- Utilize vertical storage to maximize floor space.

Objectives
- Improve organization, and housekeeping issues.
- Increase organization and general efficiency through improved housekeeping and safety.
- Inefficiencies result from operators leaving empty spools inappropriately stored, inactive, and damaged spools by size of location of inactive and/or damaged spools.

Current State
- Inactive, damaged, & inappropriately stored spools.
- Active, damaged, & inappropriately stored spools.

Existing Factory Layout

Design Approach Method
- We are using an integrated 6S and DMAIC process as a methodology to design the storage system and improve operational efficiency through improved housekeeping practices.

Measure
- Data used to determine the capacity required for the new storage system.
- Identifies spools that should be removed from production floor.

Analyze
- Analyzed and evaluated multiple alternative conceptual storage systems.

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Project Evaluation Criteria
- Metric: Vertical storage to maximize floor space
  - Capacity
    - Vertical Carousel
    - Bulk Storage Rack
    - Pallet Flow Racks
    - Pull Out Units
    - Vertical Carousel
    - AS/RS Retrieval System

Design Evaluation Criteria
- Score
  - Vertical Carousel: 1
  - Bulk Storage Rack: 2
  - Pallet Flow Racks: 3
  - Pull Out Units: 4
  - Vertical Carousel: 5
  - AS/RS Retrieval System: 6

Team Members
- Ivianne Tompkins
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Insert team photo