

Determining and calculating the amount of scrap of all kinds present inside the factory and linking them to performance measurement rates | Reducing the waste of main materials during the manufacturing process by 5%..



Problem Statement

After analyzing the **factory's expenses**, it was found that the largest portion of expenses was being spent on purchasing **raw materials** for the manufacturing process, which did not match the output of the final products.

Therefore, the goal was to analyze the process of consuming raw materials within the factory and regulate it.

Goals

- **Tracking** and accurately calculating the scrap generated during the production process.
- Analyzing the causes of scrap.
- **Reducing** the total amount of scrap by 5%.
- **Calculating** the cost of scrap before and after reducing it.

Application

- **Identifying** areas where scrap occurs, **analyzing** the causes of scrap and restarting.
- **Training** engineers, technicians, and workers on the optimal method of executing production and manufacturing processes with minimal scrap and defects.
- **Developing** a preventive maintenance plan for machines and equipment to reduce material waste.
- **Establishing** and activating the quality management cycle to record, track, and measure defects and scrap.
- **Creating** standard operating procedures for operations and machines to reduce machine setup and operation time (where the largest amount of material waste occurs).



Results

- **Tracking scrap** amounts and percentages and restarting production processes instantly throughout the day (POWER BI dashboard).
- Reducing scrap in process 1 by **12%**.
- Reducing scrap in process 2 by **4%**.
- Reducing scrap in process 3 by **6%**
- Saving production costs after reducing scrap and restarting by **(175000)** EGP per month.
- Saving time consumed in restarting processes by **(820)** minutes per month.
- Utilizing time to increase production by **4%**