
Gestione della produzione

Finalità

State-of-the art concepts and techniques are combined to offer a practical solution to enhancing the manufacturing planning and the control systems.

Programma

I – TRADITIONAL TECHNIQUE FOR MANUFACTURING PLANING AND CONTROL

- 1 – Demand Management (Demand management and production planning – Demand management technique: moving average – exponential smoothing – exponential smoothing + trend and seasonality correction)
- 2 – Inventory Control (The Economic Order Quantity Model – Periodic Order Quantity – Dynamic Lot Sizing)
- 3 - La programmazione della produzione a flusso continuo (Gestione a fabbisogno e programmazione in cascata - Programmazione della produzione a quantità prestabilite - Programmazione a copertura costante)
- 4 - La programmazione della produzione a lotti (Programmazione della produzione a lotti con produzione di un solo prodotto - Programmazione della produzione a lotti con produzione di più prodotti - Il tempo di attrezzaggio e il concetto di domanda critica - La produzione per cariche)
- 5 – Project Management Technique (Work Breakdown Structure - Gantt – Critical Path Method – Project Evaluation and Review Technique)
- 6 - Stopwatch time - Work Sampling - Predetermined Time Study

II_MRP II

- 1 – Manufacturing Planning and Control (Definition – System framework – evolution of MPC systems - Manufacturing Resource Planning (MRP II))
- 2 - Production Plan (Bowman - Magee – Simulation What If - Resource Requirements Planning (RRP))
- 3 – Master Production Planning (Time Cycle Chart – Two level Master Production Scheduling – Methods for constructing Planning Bill of Material Rough-Cut Capacity Planning (RCCP))
- 4 - Material Requirements Planning (MRP) (Low Level Coding - Capacity Requirements Planning (CRP))
- 5 – Bill of Material
- 6 – Scheduling (Scheduling framework - Finite Capacity Scheduling (FCS) – Displacing rule; flow-shop and job-shop scheduling)

III – ADVANCED CONCEPS IN PRODUCTION PLANNING AND CONTROL SYSTEMS

- 1 -Just In Time (JIT) and kanban scheduling
- 2 – Just in Time and MRP integration: Synchro-MRP
- 3 - Workload control (Order review and release strategies (ORR) - Load-oriented manufacturing control)
- 4 - CONWIP system
- 5 - Optimise Production Technology (OPT)

Attività d'esercitazione

Most of the basic principles and technique have been supporting by examples during the course.

Modalità d'esame

Most of the basic principles and technique have been supporting by examples during the course.

Propedeuticità

No

Testi consigliati

- A. Brandolese, A. Pozzetti, A. Sianesi, “Gestione della produzione industriale”, Ed. Hoepli, Milano, 1991
T. E. Vollmann, W. L. Berry, D. C. Whybark, “Manufacturing planning and control systems”, Irwin Mc Graw Hill, New York, 1997.
J. S. Martinich, “Production and operations management”, John Wiley, New York, 1997