PRACTICAL
CONVEYOR, CHUTE AND FEEDER DESIGN

YOU WILL LEARN BEST PRACTICE IN:

- Maintenance of conveyors
- Troubleshooting conveyor problems
- Splicing techniques
- Safety management
- Design and installation
- Capacity, sizing and power of equipment
- The fundamentals of belt conveyor, chute and feeder design

WHO SHOULD ATTEND:

- Consulting engineers
- Design engineers
- Electrical engineers and technicians
- Maintenance engineers, technicians and staff
- Mechanical engineers and technicians
- Operation, maintenance, inspection and repair managers, supervisors and engineers
- Plant engineers

IDC TECHNOLOGIES

Technology Training that Works

The Workshop

The workshop will deal with the nuts and bolts of conveyor, chute and feeder design.

Belt conveyors frequently provide the most satisfactory and economical method of transporting materials such as mine ores, earth, sand, crushed stone, cement and concrete. The high and continuous speed of operation of the belt makes for a high capacity of transport of materials.

This workshop is designed for engineers and technicians from a wide range of abilities and backgrounds and will provide an excellent introduction to basic design rules of conveyors and chutes. It is intended to cover the fundamentals and would be useful for those with little experience in this area.

A basic knowledge is provided of the bulk materials characteristics and properties. This will enable you to have a far stronger ability to troubleshoot and design workable conveyor systems.

Pre-requisites

Fundamental knowledge of basic mechanical plant and operation thereof.

Practical Sessions

This is a practical, hands on workshop enabling you to work through practical exercises which reinforce the concepts discussed.

To gain full value from this workshop, please bring your laptop/notebook computer.

On-Site Training

- ✔ **SAVE** over 50% by having an IDC workshop presented at your premises.
- ✔ Customise the training to **YOUR** workplace.
- ✔ Have the training delivered when and where you need it.

Contact us for a **FREE** proposal.

The Program

INTRODUCTION AND OVERVIEW

PRACTICAL CONVEYER DESIGN

- Review of bulk material characteristics
- Layout
- Component selection
- Lump size limitation
- Capacity
- Minimum pulley diameters
- Burden cross sectional area calculations
- Volumetric capacity
- Velocity calculations
- Idler spacing and load rating
- Belt tension calculations
- Drive arrangements
- Power demand capacity
- Starting and stopping
- Start up current calculations
- Vertical curves
- Gearbox and drive selection
- Safety factors
- Bearing types and selection

Conveyer design calculations exercises

CHUTE DESIGN

- Liner selection
- Use of solidworks
- DEM and application to transfer design
- Stress analysis using cosmos

Chute calculation exercise

FEEDER DESIGN

- Calculation of loads/drive torques and power
- Feeder selection

Feeder design exercise

APPLICATIONS AND FUTURE TRENDS

- Case studies
- Future trends in conveyers and hoppers/ bins and chutes

SUMMARY, OPEN FORUM AND CLOSING

> *The Instructor put points across excellently - due to his personal experience.*
>
> Marius Joubert