

BELT CONVEYER MOTIONS AND BELT CONVEYOR DESIGN

Code	Credit Hour
MinE-843	3-0

CourseDescription

Nature of bulk solids, Properties of particles, Introduction to belt conveyors system, Features of belt conveyors (Belt construction, Idlers, Drive arrangements, Power unit, Loading and discharge arrangements, Belt cleaners), Belt conveyor design (Belt width, Belt speed, Belt tension, The bulk solid to be transported), Belt conveyor variants (Cable belt conveyor, Belt conveyors without idlers, Closed belt or pipe conveyors, Sandwich belts)

Textbook:

1. Woodcock. C.R.and Mason. J.S.” Bulk Solids Handling: An Introduction to the Practice and Technology”. ISBN 978-94-009-2635-6

ReferenceBook:

1. Shamlou. P. A.” Handling of Bulk Solids: Theory and Practice”. ISBN-13:978-1483112091

Prerequisites

Nil

ASSESSMENT SYSTEM FOR THEORY

Quizzes	15%
Assignment	5%
Mid Terms	30%
ESE	50%

TeachingPlan

Week No	Topics	LearningOutcomes
1	Introduction	CourseOutline,objectives,teachingplan,assessmentmethod , conceptsreview. Introduction to belt conveyer motions and belt conveyor design
2-6	Fundamentals of Belt Conveyor Systems and Bulk	Nature of bulk solids, Properties of particles, Introduction to belt conveyors system. Loading and

	Solids Handling	discharge arrangements, Belt cleaners).
7-8	Power consumption of Belt conveyor	Features of belt conveyors (Belt construction, Idlers, Drive arrangements, Power unit
9	MIDTERM EXAM	
10-14	Heading: Belt Conveyor Design and Variants	Belt conveyor design (Belt width, Belt speed, Belt tension, The bulk solid to be transported), Belt conveyor variants (Cable belt conveyor, Belt conveyors without idlers, Closed belt or pipe conveyors, Sandwich belts)
15-17	Case studies	Belt conveyor comparison across Pakistan
18	END SEMESTER EXAM	