



COURSE DATASHEET

Semester:	2014/15/1
Course:	Physical Materials Treatment and Machines for Silicate Industry I.
Code:	VEMKGEB112L
Responsible department:	Institute of Mechanical Engineering
Department code:	MKGEI
Responsible instructor:	Dr. Sándor Verdes

Course objectives:

To make known working of machines used in silicate industry and in related areas. Calculation of main geometrical and running parameters

Course content:

About silicate industrial machines. Structural materials. Basics of design. Design calculations of axes for mixing. Critical rotation speed. Driving mechanism for mixing and constructional solutions. Calculations of pressured vessels. Bended and pressed rings. Thin-walled shells, strains. Closing solutions for tanks. Accessories for vessels. (Flanges, studs) Supports. Equipments and apparatuses under different stresses (vacuum, heat, rotation). Basics of size-changing processes. Basics of classification and separation. Technologies, processes and machines. Systemtechnic approach.

Requirements, evaluation and grading:

2 test papers and 2 homework-studies

Required and recommended readings:

Talabér J.: Szilikátipari kézikönyv, Műszaki Kiadó, Budapest, 1982. Fábry Gy.: Vegyipari gépszek kézikönyve, Műszaki Kiadó, Budapest, 1987. Fejes – Tarján: Vegyipari gépek és műveletek, Tankönyvkiadó, Budapest, 1979. Péter Gy.: Kerámiaipari gépek, Műszaki Kiadó, Budapest, 1974.