

# Classification of Diploma Thesis – supervisor

<b>Author of classification:</b>	prof. Ing. Pavel Kolat, DrSc.
<b>Supervisor:</b>	prof. Ing. Pavel Kolat, DrSc.
<b>Opponents:</b>	Ing. Ondřej Němček, Ph.D.
<b>Title:</b>	Proposal of Rotary Kiln for Hazardous Waste Incineration Plant.
<b>Thesis version:</b>	1
<b>Student:</b>	Mohammed Navas Korath Ellathvalappil

## 1. *Achieved results*

Diploma thesis deals with the design of an incineration plant using rotary kilns for the incineration of hazardous waste. It is devoted to a comparison of different methods of hazardous waste incineration and their basic description. The design of the rotary kiln is processed with regard to legislative and design requirements with regard to the residence time of flue gases in the combustion chamber. Incineration plant was dimensioned with regard to meeting the ecological limits of solid and gaseous emissions. The solution has a technical benefit and the possibility of practical use in industry.

## 2. *Problematics of thesis*

The work is current and has a connection to practice. The complexity of the assignment in terms of professional and time is technically extensive. For instance the dimensions of the combustion chamber have been designed to meet the general parameters with regard to the ratio of the length and diameter of the rotary kiln, the inclination and the residence time of the waste in the rotary kiln with respect to the speed.

## 3. *Student's proceed to work at thesis*

The student worked independently and carefully solved all required tasks in the design of a rotary kiln for danger industrial waste. Consultations were held with regard to covid situation and student work in Indonesia online.

## 4. *Formal essentials of thesis*

The formal requirements of the work, such as errors and omissions, their seriousness, clarity and external arrangement, graphic attachments, are at a good level. Some inconsistencies in the expression of the equations are not significant and do not affect the result. The work corresponds to the normalization or operating and safety regulations.

## 5. *Questions to student*

1. Explain rotary kiln combustion control system according picture 35.
2. What is the use of this technology for the disposal of hazardous substances in India. List the manufacturer of these technologies.

## 6. *General revaluation of thesis*

Based on calculations and study and literature search, the student designed a solution for a hazardous waste incinerator with a rotary kiln and a combustion chamber.

The objectives of the assignment have been met and therefore I recommend the diploma thesis for defense.

**Overall classification: very good**