

### Declaration

The information is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the course and shall attend the course completely.

Place

Signature of the applicant

Date

### Registration Fees Details

Participation from Industry Rs 5000/-

### Last date of confirmation of participation

30<sup>th</sup> september 2013

### About the Department

Mechanical Engg Department is one of the oldest and largest Department in the Institute. It was recognized as the first Department is the QIP Center. The Department is focusing on research and development consultancy work in addition to teaches UG and PG levels. A large number of Ph D and M.Tech (Res) students are enrolled for research work in different emerging areas.

### About the institute

National Institute of technology, Rourkela is one of the premier center for teaching, research and industrial consultancy. The institute has 17 departments. The campus is situated in the green environment. The

weather in the month of October is very pleasant. Rourkela is located in the north-western tip of the Indian state Odisha at the heart of a rich mineral belt. It is surrounded by a rose of hills and encircled by rivers. One of the largest steel plants of the steel authority of India limited is situated here. The name Rourkela means "Our Village" derived from Rour which means "Our" and Kela means "Village" in the local language Sadri spoken by the Rouria tribes living here.

### Accommodation and Travel

The participants should make their own arrangement for boarding and lodging. Working lunch will be provided for all participates. TA & DA will not be paid. Participates required accommodation (on twin sharing basis) and full boarding can be arranged, if informed in advance, in the institute guest house on extra charge of Rs. 1500/- .

### Address for communication

Dr. K P Maity

Co-ordinator, short term course

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## ***A four day short Term Course for industry personel***

on

## **DEFORMATION CRITERIA AND MODELLING FOR ROLLING PROCESS (DCMRP)**

3<sup>rd</sup>-6<sup>th</sup> Oct 2013



Co-ordinator  
Prof. K. P. Maity  
Organised by

**MECHANICAL ENGINEERING DEPARTMENT  
NATIONAL INSTITUTE OF TECHNOLOGY**

**Rourkela -769008**

## INTRODUCTION

Rolling is a bulk metal deformation process widely used in different industries. It is highly essential to control the process parameter in order to improve the quality of rolled product. The base know-how of metal deformation process is very important for every practice engineer in order to develop sound knowledge of the control process. Modeling of the rolling process will enhance the knowledge of the process.

## OBJECTIVES OF THE COURSE

- ✓ To acquaint the practice Engineers of the Industry the basic deformation criteria for rolling.
- ✓ To impart the techniques high level theory for modeling of the rolling process.

## COURSE CONTENT

1. Basic theory of stress Equilibrium Approach

2. Basic theory of stress Equilibrium Approach applied to rolling process
3. Basic theory of Upperbound Theorem
4. Three dimensional upperbound method based on dual stream method
5. Modeling of rolling process using upperbound method
6. FEM modeling of flat and section rolling using DEFORM Software
7. Visit to the rolling mill of RSP and other local industries.

## Eligibility, Selection & Dates

The course is open to all the practice engineers from industry, DD should be drawn in favour of "CONTINUING EDUCATION, NIT ROURKELA" payable at SBI, NIT Rourkela. Broucher and registration form can be downloaded from Institute website <http://www.nitrkl.ac.in>

## REGISTRATION FORM

1. NAME.....
2. DESIGNATION.....
3. ORGANIZATION.....
4. ADRESS FOR COMMUNICATION  
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.....  
.....
5. EXPERIENCE IN RESEARCH/INDUSTRY (YEARS)  
.....
6. ACCOMORDATION REQUIRED : YES/NO.....
7. DD PARTICULARS  
Amount Rs. ....  
DD No. ....

ANY OTHER INFORMATION