

steeluniversity

Steeluniversity predstavuje jeden z najkomplexnejších interaktívnych vzdelávacích modulov v oblasti metalurgie železa a ocele. Interaktívne výklady a simulácie boli navrhnuté ako výučbové a tréningové pomôcky pre všetkých študentov a učiteľov hutníctva železa a ocele a pre priemyselných zamestnancov oceliarní.

Vo vzdelávacom module sa nachádzajú nasledujúce časti:

- príprava vsádzky pre výrobu surového železa,
- výroba surového železa vo vysokej peci,
- výroba ocele v kyslíkovom konvertore,
- výroba ocele v elektrickej oblúkovej peci,
- sekundárna metalurgia,
- plynulé odlievanie ocele,
- valcovanie ocele,
- mechanické vlastnosti ocele,
- termodynamika a kinetika procesov výroby železa a ocele.

Na využívanie všetkých prístupných interaktívnych častí vzdelávacieho modulu Steeluniversity je potrebná jednoduchá registrácia (cca 3 min.). Na nasledujúcich printscreenoch sa nachádzajú ukážky z interaktívneho modulu Výroba ocele v elektrickej oblúkovej peci.

steeluniversity

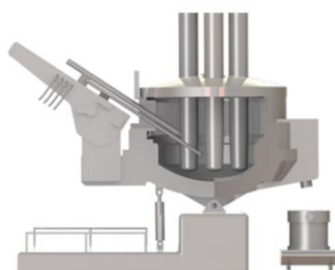
ELECTRICAL ARC FURNACE OVERVIEW

Introduction

This module introduces the equipment, raw materials and processes used to produce steel in the EAF, finishing with a simulation, which allows you to put all this in practice and melt your own cast.

Learning Object

- Understand the physical processes related to the production of steel.
- Learn about the different stages in the Electric Arc Furnace process.
- Identify where the Electric Arc Furnace fits in the steel production process.



Navigation: < > ☰

steeluniversity

BASIC EQUIPMENT AND OPERATION

This is the EAF (Electric Arc Furnace) where primary steelmaking takes place.



scrap baskets are carefully loaded at the scrap yard with recycled steel scrap.

Navigation: ☰


tuke - Hľadat' Googl... x Posta na tuke.sk x steeluniversity - Hf... x steeluniversity Lear... x MAN0105210. Basic Equ... x

steeluniversity.lms.crossknowledge.com/data/content/Final/1279/CCD0AA81-3FF9-59C7-80A4-27F921 Hľadat

steeluniversity

BASIC EQUIPMENT AND OPERATION

This is the EAF (Electric Arc Furnace) where primary steelmaking takes place.



Second basket is charged into furnace.

3

The image shows a 3D model of an Electric Arc Furnace (EAF) in operation. A grey ladle is positioned above the furnace, pouring a stream of molten metal into a central basket. The furnace itself is a large, cylindrical vessel with a tilting mechanism. The molten metal is shown as a bright orange and yellow liquid. The background is a plain white surface. A red menu icon is visible at the bottom center of the image.


tuke - Hľadat' Googl... x Posta na tuke.sk x steeluniversity - Hf... x steeluniversity Lear... x MAN0105210. Basic Equ... x

steeluniversity.lms.crossknowledge.com/data/content/Final/1279/CCD0AA81-3FF9-59C7-80A4-27F921 Hľadat

steeluniversity

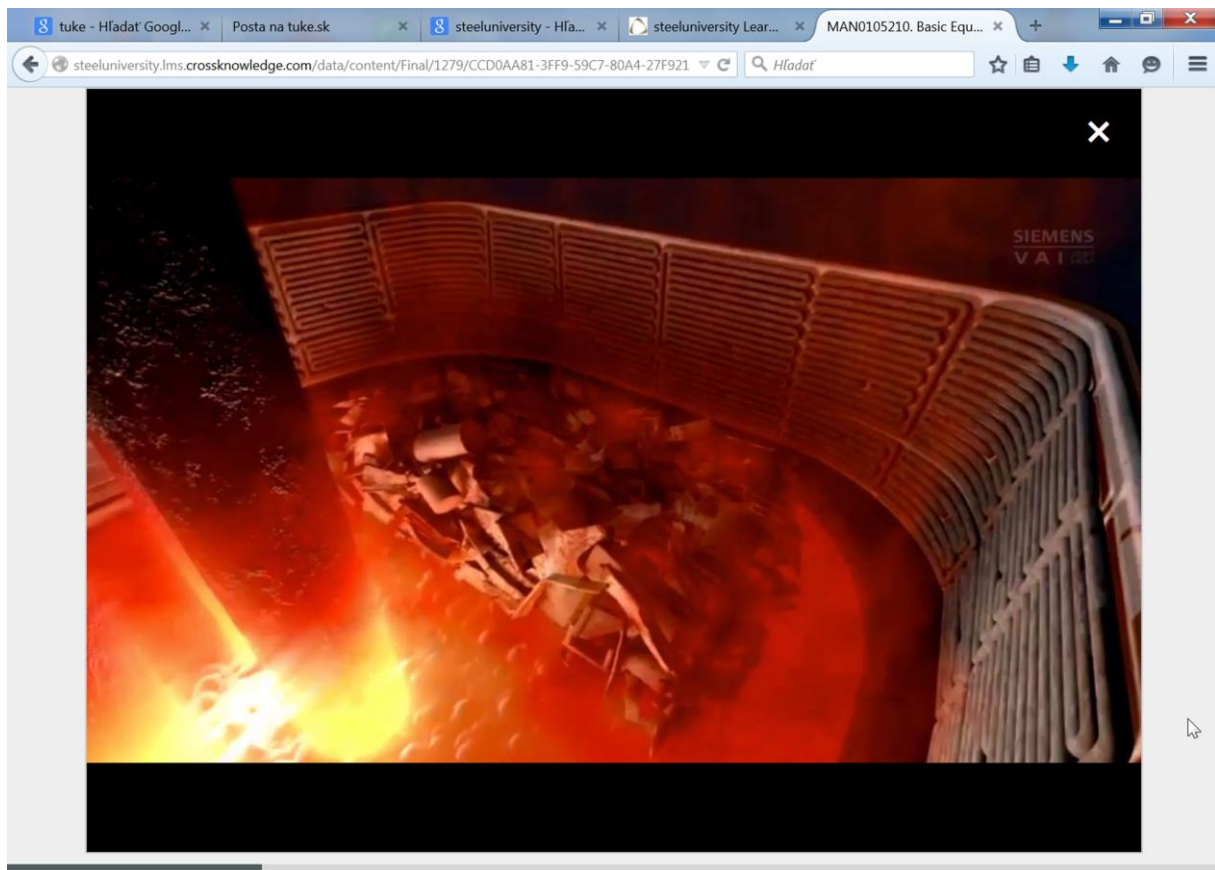
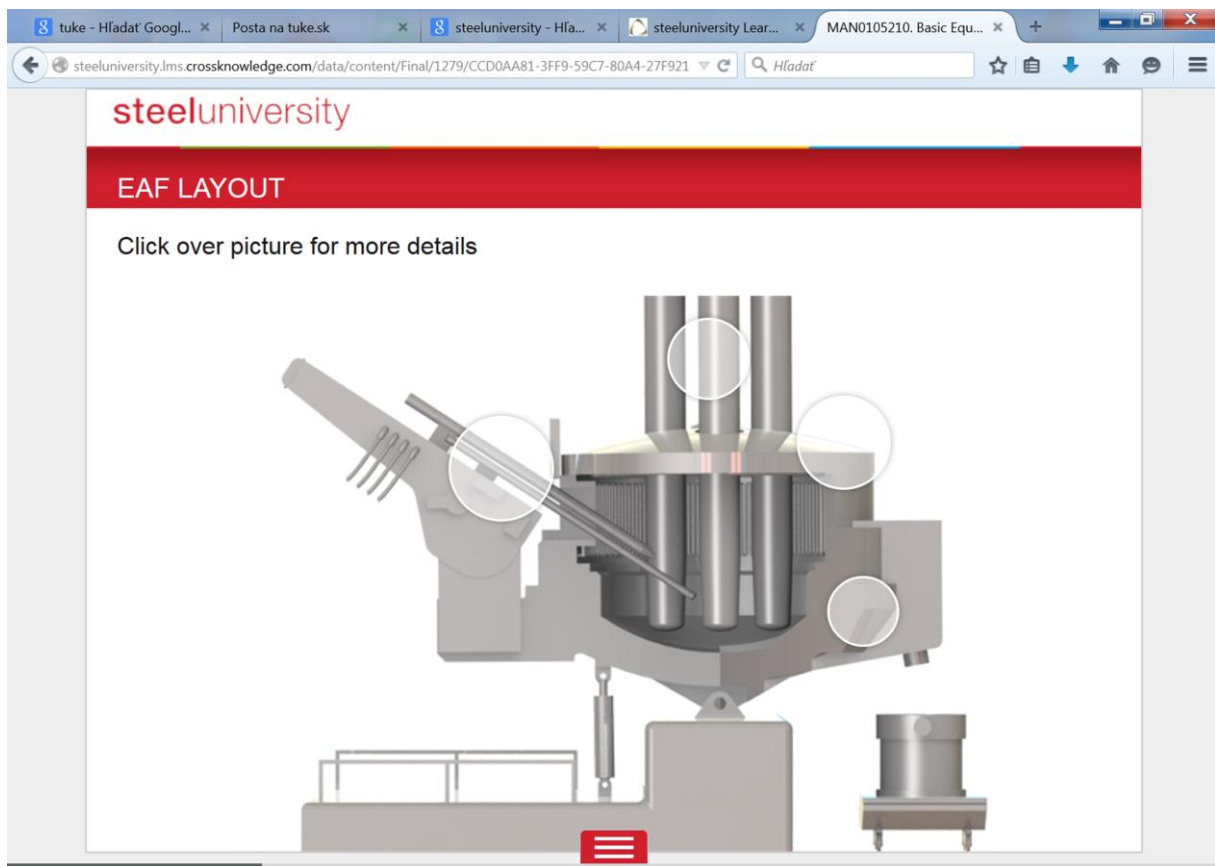
BASIC EQUIPMENT AND OPERATION

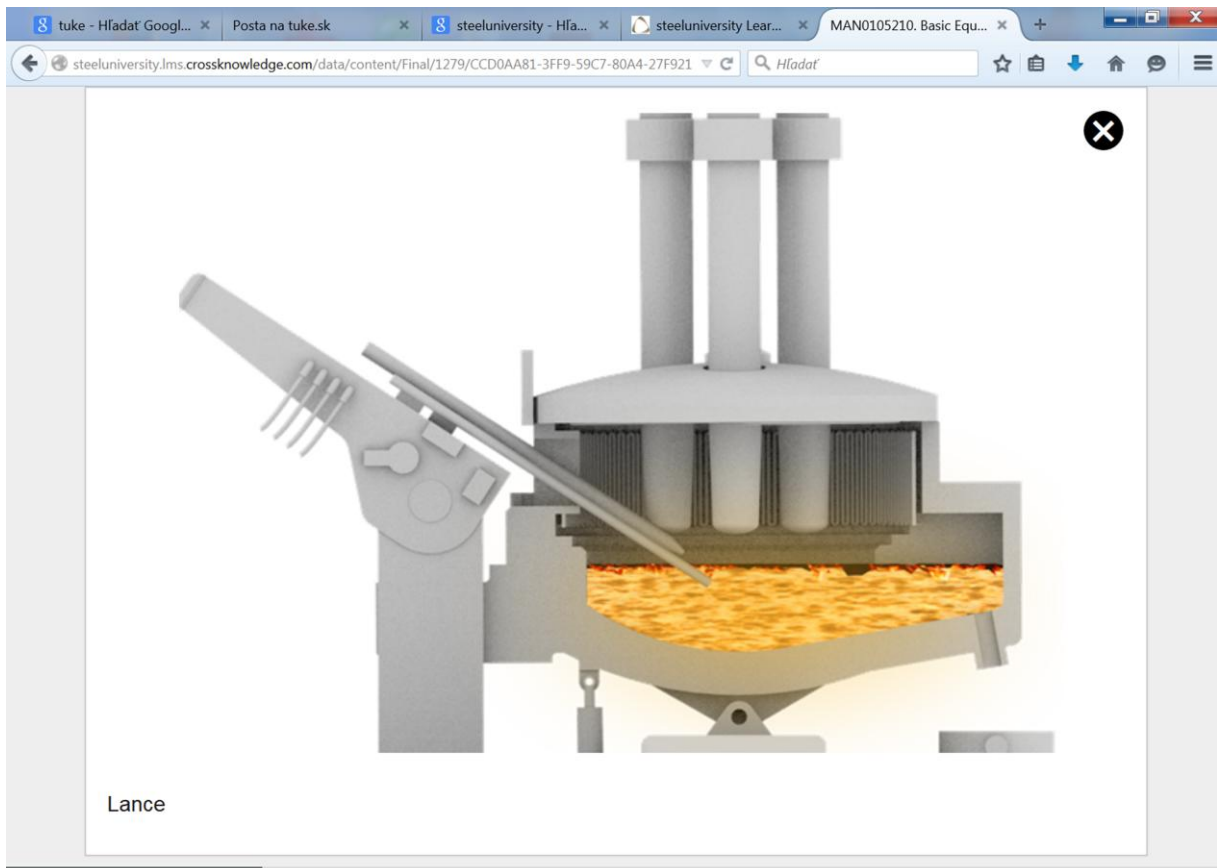
This is the EAF (Electric Arc Furnace) where primary steelmaking takes place.



3

The image shows a 3D model of an Electric Arc Furnace (EAF) in a static state. A grey ladle is positioned above the furnace, but it is not pouring metal. The furnace is a large, cylindrical vessel with a tilting mechanism. The background is a plain white surface. A red menu icon is visible at the bottom center of the image.





provided power. Thus the electrodes have to be raised or lowered depending on the voltage reading.

Video with example of electrode power efficient and position adjustment
steeluniversity

Electric Arc Furnace Simulation

00:30:46 °C 90

#1 #2 #3 Tap Setting 2

Simulation Rate 30

Slag door Lance Flow

Carbon 0 kg/min

Oxygen 0 Nm³/min

Roof Load basket 1 2 3

Take Sample Make Additions Start Tapping

Event Log Chemical Analysis

Water Cooling

The Electrode Power is Turn On with a Tap Setting of 2