Industrial Visit Report

Name of Industry: Pioneer Furnaces, Vitthal Udyognagar, Anand

Date of Visit: 6/4/2018

Faculty Coordinators: Dr. Mukesh M Bhesaniya, Prof. Rakesh M Patel

Class: 4th Year B.E. & 1st Year M.E. (Power System)

Number of Visitors: 16 students + 2 Faculty Members

Department of Electrical Engineering has organized an industrial visit of Pioneer Furnaces, Vitthal Udyognagar, Anand for 4th Year UG and1st year PG students. 16 students along with 2 faculty members visited the company on above mentioned date. Pioneer Furnaces Pvt. Ltd., as the Company is known today, was founded in the year 1972 as a Partnership firm for the manufacture of induction melting and holding furnaces and electric heat treatment furnaces for the metals industry.

Their unique solutions are today driving industries as diverse as non-ferrous extrusions industry, copper wire industry, primary metals plants, aluminium casting industry, etc. with

- High-efficiency induction heaters for extrusion presses,
- Twin-chamber melting-cum-holding furnaces for the vertical caster for electrical copper wires and sheets
- Melting furnaces for copper and zinc plants.
- Aluminum casting industry with chamber type heat treatment furnaces for solutionising and annealing.
- Apart from various other special devices and machines for charging the furnace, lining removal etc.

After reaching at company we were divided into two groups and we started visit various department like Transformer Department, Panel Department and also Furnace Department. In the panel design they use Siemens PLC controller, Temperature sensor, relays, contactors, capacitor etc.

In the furnace Primary winding is copper hollow coil and melting metal act as secondary winding. For the cooling purpose water is use in the winding. Mainly there are two types of furnace (A) Core Induction (B) Coreless Induction furnaces. Furnace working principle is same as transformer. For lifting up melting metal out of the furnace hydraulic jack are use and refractory material use for protection of winding against higher temperature inside furnace.

In order to provide state-of-the-art solutions to their customers, Pioneer has been at the forefront in adopting and supplying new technologies and processes to its customers. Pioneer had the advantage of a technical collaboration with reputed German manufacturers of induction and heat treatment furnaces. Pioneer's ISO 9001 - 2008 certification is a testimony to its commitment to provide products that always exceed performance and quality expectations.

The visit was very fruitful as we observed each of manufacturing department of induction furnaces. We collected very important information like practical data which are not available in books and other literature. Many of our doubts are cleared by the discussion with experts of the company.

Dr. Mukesh M Bhesaniya
Faculty Coordinator


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