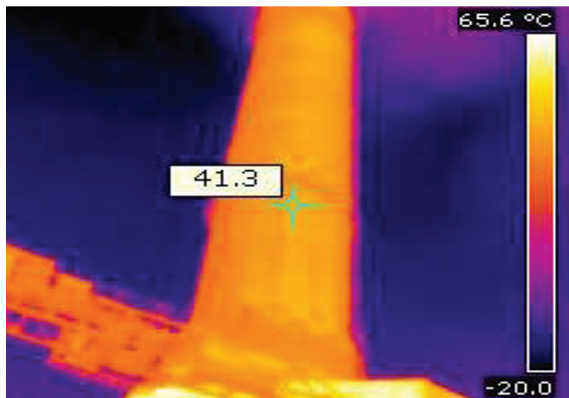


Goal of the project:

The goal of the project consisted in performing structural health monitoring for two reinforced concrete chimneys.

Short description of the project:

The chimneys belong to the Rovinari Power Plant. After 30 years in service (around year 2000), the chimneys presented numerous large vertical cracks. They were strengthened and, in order to keep under observation the performance of the strengthening system, a Structural Health Monitoring Program was initiated. Since the main cause of the structural damages was the temperature gradient, it was settled to keep under strict supervision the exterior temperature of the chimneys.



Project implemented by:

Faculty of Civil Engineering, Department of Civil Engineering and Equipments

Implementation period: 2012- 2013

Main activities:

Performing FE Analyses and conceive and implement the SHM program. Four intermediate site investigations and reports were performed, every three months.

Especially, measurements of exterior temperature distribution were carried out through thermograph procedure.

Results:

The monitoring program enabled the structural expert and the client to keep under real-time observation the condition of the two structures, enabling them to be kept further in use.

Fields of interest:

Civil Engineering
Structural Health Monitoring
Long time performance and behaviour of reinforced Concrete Special Structures

Financed through/by:

Energy Complex Oltenia, Branch Electrocentrale Rovinari

Research team:

Prof., Dr. Civ. Eng. Valeriu STOIAN
Assoc. Prof. Dr. Civ. Eng. Daniel DAN
Assist. Prof. Dr. Civ. Eng. Sorin-Codrut FLORUȚ
Eng. Simon PESCARI, PhD Student

Research centre:

Research Centre for Retrofitting of Constructions

Applicability and transferability of the results:

The technical solutions provided within the framework of the current contract could be applied for any other similar situation.

Contact information:

E-mail: valeriu.stoian@ct.upt.ro
Web: <http://www.ct.upt.ro/centre/reco.htm>