Thematic Section: Physical-Chemical Researches	·	Full Paper
--	---	------------

Subsection: Physical-Organic Chemistry.

Registration Code of Publication: 10-19-3-61

Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*". http://butlerov.com/readings/

Contributed: February 27, 2010.

## Fire resistance of building construction elements during fires in oil and gas complex

© Enaleev R. Shakirovich, 1\* Eduard Sh. Telyakov, 2 Oksana A. Tuchkova, 3+ Vladimir A. Kachalkin, 4 and Lilia E. Osipova 5

Chair of chemical cybernetics; <sup>2</sup> Chair of machinery and devices for chemical productions;
Chair of machinery and devices for chemical productions. Kazan state technological university.
 K. Marx St., 68. Kazan, 420015. Republic of Tatarstan. Russia. E-mail: mahp\_kstu@mail.ru
Chair of informatics and higher mathematics. Kazan Institute(branch) of Russian state trade-economic university. Kremlevskaya St., 25. Kazan, 420111. Republic of Tatarstan. Russia.
Chair of heat and gas supply. Kazan state architectural and construction university.
 Zelenaya St., 1. Kazan, 420043. Republic of Tatarstan. Russia.

\*Supervising author; \*Corresponding author

Keywords: construction element, standard fire, special heating, Heating model.

## **Abstract**

Mathematical model has been developed for computing the temperature field of construction elements at different combined bordering conditions. As a damage criterion of reinforced concrete structures the critical temperature of 600 °C is offered at the depth of 2 mm from the heated surface, taken at different heat rates.