

# IMPACT OF RUSSIAN INVASION OF UKRAINE TO KIPT INFRASTRUCTURE

## CONTENT

1. DEPARTMENT OF PURE METALS, METALLOPHYSICS AND TECHNOLOGY OF NEW MATERIALS, LAB.11-20
2. DEPARTMENT OF PHYSICS OF RADIATION PHENOMENA AND RADIATION MATERIAL SCIENCE
3. DEPARTMENT OF PLASMA DYNAMICS
4. DEPARTMENT OF STELLARATORS
5. DEPARTMENT OF RELATIVISTIC HIGH CURRENT TECHNOLOGIES
6. DEPARTMENT OF MAGNETOPLASMA TECHNOLOGIES AND SMALL-SIZED PULSED ACCELERATORS
7. "NUCLEAR FUEL CYCLE" SCIENCE AND TECHNOLOGY ESTABLISHMENT
8. DEPARTMENT OF RADIATION-RESISTANT CERAMICS AND PROSPECTIVE TECHNOLOGIES
9. KARAZIN KHARKIV NATIONAL UNIVERSITY, EDUCATION AND RESEARCH INSTITUTE "SCHOOL OF PHYSICS AND TECHNOLOGY

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Fig.1. X-ray diffractometers DRON-2 and DRON-4



Fig.2. Scientific staff near the diffractometer DRON-4 and XRF spectrometer SPRUT-M

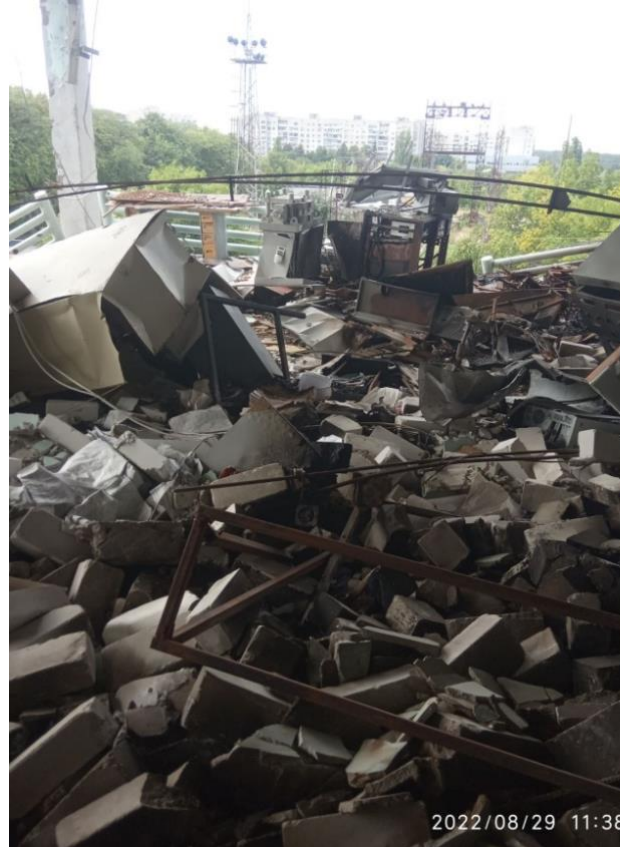


Fig.3. Damaged building and room of X-ray laboratory



Fig.4. Destroyed X-Ray diffractometer DRON-2



Fig.5. Burnt XRF spectrometer SPRUT-M



Fig.6. Restored walls and roof of destroyed building





Fig.7. Restored rooms of X-ray laboratory

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Fig. 1.



Fig. 2.



Fig. 3.

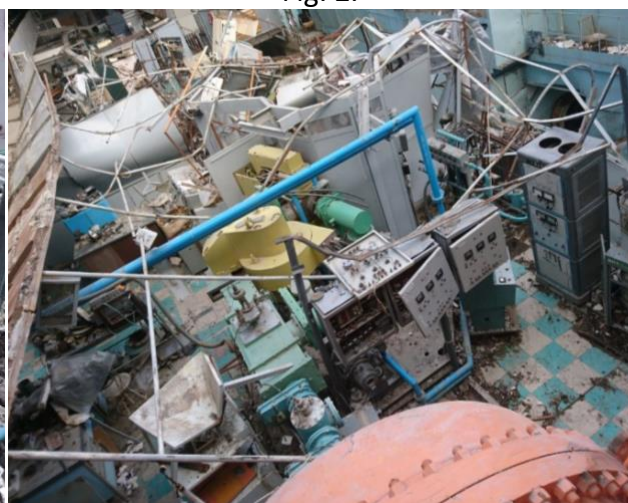


Fig. 4.

Figs. 1-4. Building and electrostatic accelerator with an external source of metal ions "ESUVI" after non-stopped shelling of KIPT.

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Several laboratories of the NFC STE NSC KIPT were damaged, as a result the special ventilation system was destroyed and the windows and roof of the building were damaged (Fig. 1).



Fig. 1 – Laboratory for powders treatment with destroyed technological equipment

Destroyed technological equipment that is not subject to repair: a drying box and a furnace for pellets sintering in an air atmosphere, a spheroidizer for grinding powders and manufacturing microspherical nuclear fuel (Fig. 2).





Fig. 2 – The destroyed technological equipment: muffle furnace, drying box, spheroidizer



Fig. 3 – Location of damaged laboratory analytical scales

Work is currently performed to restore the damaged planetary mill, and the diffractometers, which have been standing for many months in unheated premise with high humidity (Fig. 3).



Fig. 4 - The equipment that can potentially be repaired

It should be noted that, as of now (March 2023), the building with laboratories and production areas of the NFC STE lacks heating and water supply. As a result the temperature in the premises in winter reached  $-2\text{ }^{\circ}\text{C}$ . Work was carried out to merge the technical water and the heating system, and the equipment was mothballed.

## 8. DEPARTMENT OF RADIATION-RESISTANT CERAMICS AND PROSPECTIVE TECHNOLOGIES

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Damages of the building of the DEPARTMENT OF RADIATION-RESISTANT CERAMICS AND PROSPECTIVE TECHNOLOGIES





## 9.KARAZIN KHARKIV NATIONAL UNIVERSITY, EDUCATION AND RESEARCH INSTITUTE “SCHOOL OF PHYSICS AND TECHNOLOGY”

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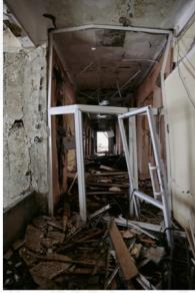


 Karazin University

**Total damage – over € 100 mln**

CLASSICS  
AHEAD OF TIME

**Damage by Russian shelling and targeted artillery attacks:**

- School of Economics and Karazin Business School
- Institute of Physics and Technology
- School of Public Administration and Karazin Bank Institute



Igor Girka

1804 → 2023

26

 Karazin University

CLASSICS  
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Education and Research institute “School of Physics and Technology” was significantly injured, but continues educational and research activities



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28